

ORIGINAL

UNITED STATES OF AMERICA  
BEFORE THE FEDERAL TRADE COMMISSION



In the Matter of )  
 )  
INTEL CORPORATION, )  
a corporation )  
 )  
 )  
 )

DOCKET NO. 9341  
  
PUBLIC

**MEMORANDUM IN OPPOSITION TO HEWLETT-PACKARD COMPANY'S  
MOTION TO QUASH INTEL'S SUBPOENA DUCES TECUM**

Intel Corporation ("Intel") submits this memorandum in opposition to Hewlett-Packard Company's ("HP") motion to quash Intel's subpoena *duces tecum* issued on March 11, 2010 ("Subpoena"). HP's motion should be denied, and it should be ordered to comply with Intel's Subpoena, as narrowed by Intel's April 19, 2010 letter.

Intel's Subpoena seeks documents necessary to defend against Complaint Counsel's broad allegations and claimed relief. The Complaint alleges that Intel engaged in unfair business practices that maintained its monopoly over central processing units ("CPUs") and threatened to give it a monopoly over graphics processing units ("GPUs"). *See* Compl. ¶¶ 2-28. Complaint Counsel's Interrogatory Answers state that it views HP, the world's largest manufacturer of personal computers, as a centerpiece of its case. *See, e.g.,* Complaint Counsel's Resp. and Obj. to Respondent's First Set of Interrogatories Nos. 7-8 (attached as Exhibit A). Complaint Counsel intends to call eight HP witnesses at trial on topics crossing virtually all of HP's business lines, including its purchases of CPUs for its commercial desktop, commercial notebook, and server businesses. *See* Complaint Counsel's May 5, 2010 Revised Preliminary Witness List (attached as Exhibit B). Complaint Counsel may also call HP witnesses on other topics, including its

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assessment and purchases of GPUs and chipsets and evaluation of compilers, benchmarks, interface standards, and standard-setting bodies. *Id.* The sweeping injunctive and declaratory relief Complaint Counsel seeks in this matter implicates Intel's prior and *current* agreements and relationships with its customers, including HP.

Intel expects to defend a case that is broader than the underlying *AMD v. Intel* private antitrust litigation ("AMD case") and involves more recent time periods, different products, and different alleged conduct. For example, unlike the AMD case, Complaint Counsel's allegations involve GPUs, chipsets, compilers, benchmarks, and interface standards. None of those were subjects of the HP discovery in the AMD case. Complaint Counsel's case regarding CPUs involves HP's commercial desktop and notebook, workstation, and server business—

[REDACTED]

HP concedes the Subpoena seeks documents that are definite in scope and relevant to Intel's defense and, thus, that it satisfies two of the three criteria for an enforceable subpoena. *FTC Manual* § 10.13.6.4.7.3. HP recognizes that Intel offered to narrow its Subpoena in an April 19 letter and that Intel has reiterated its willingness to further narrow where possible. HP nonetheless moves to quash the entire Subpoena because it claims it is "unreasonable" to be required to produce CPU documents from post-2006 or from any new custodians simply because it produced some CPU-related documents from *different* custodians or for an *earlier* time period.

HP has failed to meet the “heavy burden” necessary to quash Intel’s Subpoena. *In re Flowers Indus., Inc.*, No. 9148, 1982 FTC LEXIS 96, at \*12 (Mar. 19, 1982). HP’s memorandum does not identify any specific burden it faces. HP’s generic assertions of burden are insufficient. HP is one of the largest corporations in the world, with 2009 revenues over \$114 Billion (more than three times Intel’s revenues). Moreover, the narrowed number of custodians Intel requested in its April 19 letter (twenty-four) – despite the much broader range of subject matters and time period – [REDACTED]

## I. BACKGROUND

Complaint Counsel filed its Complaint under Section 5 of the FTC Act, a statute that was not at issue in the underlying AMD litigation and which Complaint Counsel asserts covers a broader range of conduct than was at issue in AMD’s Sherman Act claims. *See* Compl. ¶ 1 (“the Commission may consider public values beyond simply those enshrined in the letter or encompassed in the spirit of the antitrust law”) (citation omitted). The Complaint contains several categories of factual allegations different from those at issue in the AMD case, including vague allegations of coercion and deception to hinder competition in compilers, software, benchmarks, and GPUs. Complaint Counsel’s Interrogatory Answers state that it also intends to challenge Intel conduct related to HP’s purchases of CPUs in the corporate desktop, corporate notebook, and server market segments. *See* Exhibit A, Nos. 7-8. Complaint Counsel has requested documents from Intel employees responsible for HP that post-date July 2006, [REDACTED]

[REDACTED], and the Complaint seeks injunctive and declaratory relief that implicates Intel's current agreements with HP.

Intel served its Subpoena *duces tecum* on March 11, 2010, over two months ago. HP Mot., Exhibit B. The Subpoena sought documents on the *new* topics and *new* time periods in the Complaint, as well as several *new* witnesses that Complaint Counsel has identified on its trial witness list. New topics include: (a) HP's interactions with the FTC (Requests 1-6); (b) graphics and chipset interoperability and sourcing (Requests 13-14, 24, 36-55; (c) benchmarking issues (Requests 16-18); bundling issues (Request 55); and assessments of VIA (Requests 12, 26-27, 35). On April 19, Intel proposed a narrowing of its Subpoena, using a finite number of custodians and search term protocols. HP Mot., Exhibit C. The proposal reduced the number of GPU and chipset requests and proposed that HP identify six custodians most likely to have responsive documents. It also narrowed Intel's CPU-related requests and made clear that Intel sought only *new* CPU-related documents from either: (a) custodians whose files were not produced during the AMD case, four of whom were identified by Complaint Counsel on its trial witness list; or (b) more recent CPU-related documents, [REDACTED]

[REDACTED]

[REDACTED]

HP responded to Intel's proposal on April 26 with a blockade: it asked Intel to eliminate all of its requests for CPU-related custodians and informed Intel that it would not discuss Intel's other requests (*e.g.*, for GPUs and chipsets) until Intel agreed. On April 29, Intel informed HP that it was willing to discuss means to minimize any burden on HP, but that it had to maintain its

narrowed request for CPU documents.<sup>1</sup> On May 5, Intel made one final effort to reach agreement by proposing further reductions for the production of CPU documents. On May 7, HP informed Intel that it was still unwilling to produce such documents and would move to quash Intel's Subpoena in its entirety.

## II. ARGUMENT

"The law is clear that a recipient of a subpoena *duces tecum* issued in an FTC adjudicative proceeding who resists compliance therewith bears a *heavy burden*." *Flowers Indus.*, 1982 FTC LEXIS 96, at \*15 (emphasis added). HP cannot satisfy this burden. The Court should enforce Intel's Subpoena *duces tecum* and deny HP's motion to quash.

### 1. Commission Precedent Strongly Favors Discovery of Relevant Evidence

"Parties may obtain discovery to the extent that it may be reasonably expected to yield information relevant to the allegations of the complaint, to the proposed relief, or to the defenses of any respondent." 16 C.F.R. § 3.31(c)(1). "Information may not be withheld . . . if the information sought appears reasonably calculated to lead to the discovery of admissible evidence." *Id.* The operative question is "whether the subpoena seeks information that is reasonably expected to be 'generally relevant to the issues raised by the pleadings.'" *In re Rambus, Inc.*, No. 9302, 2002 FTC LEXIS 90, at \*5 (FTC Nov. 18, 2002).

"The burden of showing that the request is unreasonable is on the subpoenaed party." *FTC v. Dresser Indus.*, 1977-1 Trade Cas. ¶61,400, at \*13 (D.D.C. 1977) (internal quotations omitted). That burden, as confirmed in *Polypore*, is particularly heavy "where . . . the agency inquiry is pursuant to a lawful purpose and the requested documents are relevant to that

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<sup>1</sup> Intel also informed HP that it could not agree to a fourth 10-day extension for HP to move to quash Intel's subpoena due to the likely impasse and the need to resolve issues in advance of the June 15, 2010 discovery deadline.

purpose.” *In re Polypore Int’l, Inc.*, No. 9327, 2009 FTC LEXIS 41, at \*9 (FTC Jan. 15, 2009) (enforcing third-party subpoena) (Chappell, ALJ).

2. Intel’s Subpoena Is Definite and Calls Relevant Documents

Under the FTC Operating Manual rules, a subpoena *duces tecum* is enforceable if it is: (a) definite, (b) relevant, and (c) reasonable. *FTC Manual* § 10.13.6.4.7.3. Intel’s Subpoena is definite and seeks relevant documents, and HP does not contest either of these first two prongs. That failure, alone, should mean the Subpoena is enforceable. *Flowers Indus.*, 1982 FTC LEXIS 96, at \*12-18 (enforcing subpoena that was “generally relevant to the issues in the proceedings” notwithstanding claims of burden); *Rambus*, 2002 FTC LEXIS 90, at \*5.

HP’s claim that Intel is “not prejudiced” from relying on the discovery in the AMD case, *see* HP Mot. at 6, is incorrect. HP can point to no authority that prevents a party from obtaining new documents relevant to its defense simply because it previously obtained some documents from an earlier time period or from different custodians from the same third-party in a previous case involving different parties, different legal standards, different fact allegations and different relief. Intel has not sought duplicative discovery, and HP need not turn over a single document previously produced. But Intel is entitled to obtain new discovery in this case. Four years after the AMD document discovery took place, Complaint Counsel has alleged new facts and theories in an entirely new and independent proceeding.

3. Intel’s Subpoena Was Reasonable, Particularly As Narrowed

Given the clear relevance of Intel’s Subpoena, HP has not met its “heavy burden” to show that it is unreasonably burdensome. *Flowers Indus.*, 1982 FTC LEXIS 96, at \*12.

Tellingly, HP makes no specific claims of undue burden in responding to Intel’s Subpoena. As

the largest computer manufacturer in the world with sales over \$114 Billion last year, HP's generic assertion of burden is not credible. The fact that it is willing to produce documents related to GPUs, chipsets, compilers, and other topics suggests that its generic burden claim is merely rhetorical.

HP also argues that its status as a "non-party" should justify its refusal to comply with the Subpoena because non-parties should benefit from a lower showing of burden. HP Mot. at 5. That misstates the law. Non-parties' appeals for differential treatment have repeatedly been rejected in FTC proceedings. *See, e.g., Polypore*, 2009 FTC LEXIS 41, at \*2-\*5. Instead, non-parties, like parties, must show that compliance with the subpoena "unduly disrupt or seriously hinder normal operations of a business . . . The burden is no less for a non-party." *Rambus*, 2002 FTC LEXIS 90, at \*9. Moreover, even when a non-party "adequately demonstrates that compliance with a subpoena will impose a substantial degree of burden, inconvenience, and cost, that will not excuse producing information that appears generally relevant to the issues in the proceeding." *Kaiser*, 1976 FTC LEXIS 68, at \*19-20.<sup>2</sup>

In any event, HP is hardly a disinterested party. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

<sup>2</sup> Cases cited by HP for the proposition that third parties should bear a lesser burden in challenging a subpoena are not on point. Both involved confidentiality issues and much narrower legal disputes than the broad allegations at issue here. *Echostar Comm. Corp. v. News Corp.*, 180 F.R.D. 391, 395 (D. Colo. 1998) (discovery not relevant to narrow breach of contract claim); *Katz v. Batavia Marine & Sporting Supplies, Inc.*, 984 F.2d 422, 425 (Fed. Cir. 1993) (document and deposition subpoena "exceed the narrow scope" of patent at issue).

[REDACTED]

HP has not made any particular showing of burden, let alone demonstrated that production of microprocessor-related requests will impose a “substantial degree of burden” that would “seriously hinder” its business operations. *Rambus*, 2002 FTC LEXIS 90, at \*9. [REDACTED]

[REDACTED]

[REDACTED] To the extent that HP argues it is burdened by “duplicating efforts,” Intel’s April 19 proposed modification eliminates that argument: it asks for new CPU documents for a time period more recent than HP’s production in the AMD case and from custodians whose files HP did not produce in that case. *See Rambus*, 2002 FTC LEXIS 90, at \*10 (burden argument “undermined by the fact that [respondent] has been willing to alleviate the burdensome through compromise”); *see also Kaiser*, 1976 FTC LEXIS 68, at \*20.

HP argues in the alternative that, should Intel’s Subpoena not be quashed in its entirety, HP should be reimbursed for its costs in responding to Intel’s Subpoena. HP Mot. at 6-7. HP never proposed cost-sharing as a means of reaching a voluntary production agreement, and only mentioned to counsel for Intel that it would move on that alternate ground on the day it filed its motion. The law is clear that non-parties that are industry participants with an interest in the



outcome of the proceeding are only entitled to reimbursement for copying costs, not the costs of review and production. *Rambus* 2002 FTC LEXIS at \*15; *Flowers Industr.*, 1982 FTC LEXIS, at 17-18; *Kaiser*, 1976 FTC LEXIS at \*21-22. Notwithstanding this clear precedent, Intel is willing to share some of HP's production costs, [REDACTED]

### CONCLUSION

For the foregoing reasons, HP's motion to quash should be denied and Intel's Subpoena *duces tecum* should be enforced.

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[REDACTED] In this case, Intel is willing to share one-third of production costs, with HP and Complaint Counsel also bearing one-third.

Respectfully submitted,

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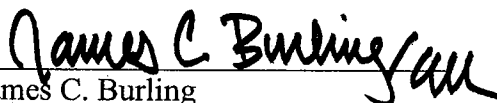
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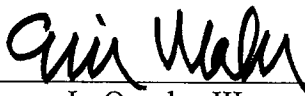
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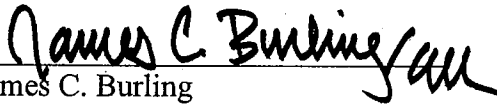
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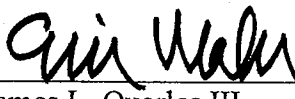
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Dated: May 17, 2010



**Exhibit A**  
**Public Version**



Trade Commission have repeatedly discussed the allegations included in the Complaint with representatives of Intel in the course of the pre-complaint investigation. For example, the FTC staff that investigated conducted a number of investigational hearings of Intel executives that addressed these issues. Staff representatives, trial counsel and the leadership of the Bureau of Competition and Consumer Protection discussed the allegations in the Complaint with Intel's representatives in dozens of meetings and phone calls throughout the fall of 2009. Despite its claims of ignorance of these topics, for many years, Intel has presented significant information to the FTC staff on many these topics and has litigated some of these issues in other litigations. Intel also engaged in settlement discussions with Commission representatives that addressed nearly all of the Complaint's allegations. Furthermore, it is our understanding that Intel discussed many of the allegations with members of the Commission in private meetings and phone calls as they sought to lobby the Commission to vote against a Complaint in this matter.

To avoid needless repetition, the answers below incorporate the information in the Complaint and the answers to each interrogatory.

**Interrogatory No. 1**

**Identify every act, omission, practice, instance, document, and/or communication by or with Intel that you contend supports your claim that Intel misled "Nvidia on Intel's CPU roadmaps." Compl. ¶ 85.**

**Response to Interrogatory No. 1**

Complaint Counsel specifically objects to this interrogatory on the grounds that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel also objects on the grounds that it seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in



the early stages. Complaint Counsel also reserves the right to supplement this response because some or all of the relevant responses may be the subject of expert discovery. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Complaint Counsel contends that Intel misled “Nvidia on Intel’s CPU roadmaps.” Intel encouraged Nvidia to innovate on the Intel platform prior to 2008. Intel has admitted that it shared CPU roadmap information with Nvidia during the relevant time period. Intel knew, and expected, Nvidia to rely on those roadmaps and other information shared by Intel representatives to develop Intel compatible chipsets.

REDACTED

Intel’s Nehalem microprocessor architecture is the successor to Intel’s Penryn/Core microarchitecture. Intel publicly revealed certain details of the Nehalem microarchitecture in mid-2007. One change between Nehalem and earlier microarchitectures was the interconnection between the CPU and the northbridge, another component on the motherboard. The CPU was connected to the northbridge via a high-speed connection called the Front Side Bus (“FSB”) in earlier Intel microprocessors including Nehalem’s immediate predecessor, the Penryn/Core microarchitecture. With Nehalem, Intel replaced the FSB with an even higher speed connection initially called the Common System Interface (“CSI”) and subsequently called Quick Path Interconnect (“QPI”).

Intel’s decision to change the connection to its CPU was important to companies which manufacture and sell Intel-compatible chipsets. Chipsets perform a variety of functions for a computer. For example, chipsets may contain some or all of the components of the northbridge and the southbridge, providing connections to memory, graphics cards, and various peripherals.

These chipsets may contain graphics capability integrated onto the chipset. For Intel CPUs with FSBs, third party hardware vendors, as well as Intel, connected chipsets to the CPU via the FSB.

Nvidia, ATI, SiS, and other third parties manufactured Intel-compatible chipsets for many years before the release of Nehalem. Intel implicitly – and at times explicitly – encouraged these third party chipset vendors to develop Intel compatible chipsets and innovate to the Intel platform. Intel licensed Nvidia, ATI, and SiS to enable them to connect with Penryn and previous generations of Intel's CPUs. Intel established a course of dealing working closely with Nvidia, ATI, and SiS to allow them access to Intel's CPUs and ensure their chipsets were compatible with Intel's CPUs. This included the disclosure of product roadmaps and other information to allow third party chipset vendors to develop Intel-compatible chipsets.

Intel's decision to replace the FSB with CSI in the Nehalem family of CPUs meant that third party chipset manufacturers had to develop chipsets that interconnected via the new CSI bus if they wanted to sell Intel-compatible chipsets. Intel disclosed the Nehalem roadmap to Nvidia and requested that Nvidia develop a CSI-based chipset in fall 2006. Intel's roadmaps share with Nvidia disclosed that there would be multiple variations of Nehalem for different market segments (e.g., servers, high-end desktops, mainstream desktops, laptops, etc.) and that all the Nehalem platforms would employ the new CSI connection in place of the FSB. RED

**REDACTED**

At about the same time Intel disclosed its Nehalem roadmap with CSI to Nvidia, Intel had already made the decision to abandon CSI and change the Nehalem roadmap. Intel decided it

would not utilize CSI as the replacement for the FSB in several of the Nehalem configurations, including the mainstream Nehalem platforms: consumer desktops and laptops. The consumer segments represent the largest volume of potential Nehalem platforms. Intel's decision to change the connection meant that for the majority of Nehalem systems, a CSI-based chipset would not be compatible.

Intel waited at least six months to inform Nvidia of the change to the Nehalem roadmap despite the fact that it knew Nvidia was investing substantial resources to develop the CSI chipset.

REDACTED

Intel knew that its new roadmap would change the economics of chipset development for Nvidia. Intel considered the possibility that developing chipsets only for the high end, low volume market segments would not be worthwhile for Nvidia. Nevertheless, Intel recognized the risk to its CPU sales if Nehalem platforms were not powered by Nvidia graphics technology, both through chipsets and discrete graphics processing units ("GPUs"), and aggressively encouraged Nvidia to continue developing CSI chipsets. Intel finally disclosed to Nvidia that mainstream Nehalem platforms would not utilize a CSI connection between the CPU and the chipset in approximately April or May of 2007.

REDACTED

Prior to the disclosure, Intel recognized that the communication of the roadmap change to Nvidia would be "painful" and Nvidia would be "upset." After the disclosure, Intel understood that its strategy of taking CSI off the mainstream

Nehalem products “really puts Nvidia into a corner” and foreclosed Nvidia from “play[ing] beyond just discrete [sic] gfx.”

The roadmap changes meant Nvidia’s chipsets could only connect to certain Nehalem platforms via a combination of the PCI Express (“PCIE”) and Direct Media Interface (“DMI”) connections for Intel’s mainstream Nehalem platforms. **REDACTED**

In reality, certain mainstream Nehalem platforms did contain a CSI connection, but Intel closed off access for third party chipsets. Intel’s mainstream Nehalem platform for laptops, codenamed Auburndale and subsequently Arrandale, contained a CSI connection between the CPU and the memory controller. Thus, a CSI-based chipset technically could connect to the CPU on the Arrandale platform. However, Intel foreclosed access to this CSI connection by placing the CPU and the memory controller on the same substrate and covering over the package with a surrounding wrapper, making the CSI connection inaccessible to third party chipset manufacturers.

In the fall of 2007, Intel internally debated whether it should enable Nvidia chipsets on the Nehalem mainstream platforms through the DMI and PCIE connections. Intel concluded that it would not, and Intel subsequently informed Nvidia that Intel believed that Nvidia did not have a license to connect a chipset utilizing the DMI bus. However, active work between Nvidia and Intel technical teams **REDACTED** on developing a DMI-based chipset continued until early 2008. Intel could have allowed Nvidia to design to connect via DMI, as it was encouraging Nvidia to do, but had already decided that it would not allow Nvidia to do so.

Intel misled Nvidia as to its future CPU roadmaps in 2006 and 2007 REDACTED

Intel used Nvidia during the period of deception because Intel did not have sufficient graphics capabilities itself and needed Nvidia's intellectual property, designs, and reputation to sell more Intel CPUs. Thus, absent Intel's deception, Intel would have still used Nvidia, but it would not have been able to foreclose Nvidia out of the integrated graphics area or limit its innovation in discrete GPUs. Intel's conduct REDACTED has harmed consumer choice and limited innovation to the detriment of competition and consumers.

**Interrogatory No. 2**

**For each instance identified in response to Interrogatory 1, identify all Nvidia products that were delayed as a result of Intel's conduct and "that would have accelerated the adoption of GPGPU computing." Compl. ¶ 85.**

**Response to Interrogatory No. 2**

Complaint Counsel specifically objects to this interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages and expert discovery has yet to begin. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Complaint Counsel contends that Intel's deception of Nvidia REDACTED

REDACTED

Intel's misleading statements about Nehalem's roadmap

REDACTED

Intel's deception REDACTED

During this time (and subsequently), RE

REDACTED

negatively impacting the adoption of GP GPU computing.

**Interrogatory No. 3**

**Identify every act, omission, practice, instance, document, and/or communication by or with Intel that you contend supports your claim that Intel "create[ d] technological barriers to interoperability to preclude the possibility that integrated CPU chipsets could interconnect with future Intel CPUs." Compl. ¶ 85.**

**Response to Interrogatory No. 3**

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and it seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to

supplement this response because fact discovery in this matter is in the early stages and expert discovery has yet to begin. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Complaint Counsel incorporates by reference our responses to interrogatories 1 and 2. In addition, Complaint Counsel contends that Intel “create[d] technological barriers to interoperability to preclude the possibility that integrated CPU chipsets could interconnect with future Intel CPUs.” Intel commercially released its Nehalem microarchitecture in 2009. One change between Nehalem and earlier microarchitectures was the interconnection between the CPU and the northbridge, another component on the motherboard. The CPU was connected to the northbridge via a high-speed connection called the Front Side Bus (“FSB”) in earlier Intel microprocessors including Nehalem’s immediate predecessor, the Penryn/Core microarchitecture. With Nehalem, Intel replaced the FSB with an even higher speed connection initially called the Common System Interface (“CSI”) and subsequently called Quick Path Interconnect (“QPI”).

Intel’s decision to change the connection to its CPU was important to companies which manufacture and sell Intel-compatible chipsets. Nvidia, ATI, SiS, and other third parties manufactured Intel-compatible chipsets for many years before the release of Nehalem. Intel implicitly – and at times explicitly – encouraged these third party chipset vendors to innovate to the Intel platform. Intel licensed Nvidia, ATI, and SiS to enable them to connect with Penryn and previous generations of Intel’s CPUs. Intel established a course of dealing working closely with such third parties in enhancing innovation and allowing them access to the FSB. Intel worked with Nvidia, ATI, and SiS to ensure their chipsets were compatible with Intel’s CPUs.

Intel's decision to replace the FSB with CSI in the Nehalem family of CPUs meant that third party chipset manufacturers, such as Nvidia, that wanted to sell Intel-compatible chipsets had to begin developing chipsets that interconnected via the new CSI bus. Intel told Nvidia of its plans to replace the FSB with CSI and worked with Nvidia to ensure that its chipsets would be compatible with CSI. Yet at the same time, Intel had already made the decision to eliminate an accessible CSI connection for mainstream Nehalem platforms. REDACTED

Intel decided to replace the CSI connection with DMI. Intel did not tell Nvidia about its decision to abandon CSI for a number of months. REDACTED

Intel ceased providing assistance to Nvidia on developing a DMI/PCIE-based chipset for the mainstream Nehalem platform in late 2007 or early 2008. REDACTED

At this time, Intel made changes to the mainstream Nehalem platform configuration that cut off further DMI/PCIE chipset development. REDACTED



In late 2008, Intel finally asserted that Nvidia required a license to access the DMI connection and that Intel would not provide such a license. Intel's refusal to allow Nvidia to utilize DMI reflected a change in Intel's position. Intel had encouraged Nvidia to develop Intel compatible chipsets – and indeed encouraged Nvidia to develop a DMI compatible chipset – for a number of years. Intel's graphics chipsets utilized DMI but it denied access to third parties such as Nvidia. Intel filed a declaratory judgment action in Delaware state court to prevent Nvidia from releasing a DMI-compatible chipset.

Intel deceived REDAC Nvidia between 2006 and 2008.

REDACTED

It was only after two years of discussion and collaboration that Intel decided to foreclose Nvidia. Intel's decision was driven by its perception of Nvidia as a potential threat to its CPU monopoly and Intel's desire to leverage a second monopoly in the chipset market.

REDACTED

would have challenged Intel's position in both the CPU and chipset markets.

#### **Interrogatory No. 4**

**Identify every act, omission, practice, instance, document, and/or communication by or with Intel that you contend supports your claim that Intel “created ... interoperability problems” that “have had the effect of degrading the industry standard interconnection” between Intel's CPU and discrete GPUs. Compl. ¶ 86.**

#### **Response to Interrogatory No. 4**

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and that it seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this

interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages and expert discovery has yet to begin. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Complaint Counsel contends that Intel “created . . . interoperability problems” that “have had the effect of degrading the industry standard interconnection” between Intel’s CPU and discrete GPUs. Intel’s CPU monopoly allows it to control the development of buses that connect to the CPU, and in turn enhances Intel’s power to exclude or reduce competition in CPUs and GPUs including graphics chipsets. On all Nehalem platforms, discrete GPUs connect via the PCIE bus. This PCIE connection is an industry standard interface based on an open specification. Although the connection itself is an open standard, the CPU can regulate the flow of data between the GPU and other components of the platform, such as the CPU and main memory. These various points of control may or may not have been visible to third party GPU manufacturers. Intel has long encouraged manufacturers of peripheral devices such as discrete graphics processing units to utilize the PCIE connection. Intel has supported the standard and represented that it would fully support that standard to allow peripheral devices access to the CPU.

There are at least three instances in which Intel reduced the speed or otherwise degraded the PCIE connection on prototype Nehalem platforms provided by Intel. These actions directly impacted the performance of GP GPU computing.

First, Intel reduced the speed of the PCIE connection on the Nehalem mainstream notebook platform, Auburndale/Arrandale. PCIE is an industry standard specification designed

to connect peripherals, including discrete GPUs. PCIE is in its second generation, and PCIE Generation 3 is currently being formulated in an industry standard setting group. Intel provided a software update to the Auburndale/Arrandale platform which had the effect of slowing down the Generation 2 PCIE connection to PCIE 1 speed. This was despite the fact that the PCIE hardware on the Auburndale/Arrandale platform was capable of supporting Generation 2 speed.

REDACTED

After Nvidia informed Intel of the results, Intel eventually advised Nvidia to change a register setting, which restored full bilateral throughput.

**Interrogatory No. 5**

**Identify every act, omission, practice, instance, document, and/or communication that you contend supports your claim that “Intel has manipulated the content and timing of [an] industry standard[] to advantage [Intel's] own products and prevent competitors from introducing standards-compliant products prior to product introduction” or “delayed accessibility to [an industry] standard[] for [Intel's] competitors,” including but not limited to each purported standard identified in the definition of “RELEVANT STANDARDS” in Complaint Counsel's First Set of Requests for Production of Documents to Respondent Intel Corporation. Compl. ¶ 92.**

**Response to Interrogatory No. 5**

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel reserves the right to supplement this response because some or all of the relevant responses may be the subject of expert discovery. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Intel's control over release of standards and over compliance testing ensures that Intel has a time-to-market advantage over its competitors. For example, Intel's host controller specification licenses require two tiers of licensing. Intel licenses discrete implementations, in which Intel does not compete, as soon as version 0.95 of the specification is released. Although such a specification can also be used to make integrated implementations, Intel's licenses prohibit integrated implementations until Intel has begun to sell its own integrated products. Intel thus ensures a time-to-market advantage over those products with which it competes. Such Intel licenses include those for the USB ehci and xhci host controllers and AHCI, the Serial ATA host controller specification.

Intel represented that it would release host controller specifications to competitors once they are stable. Intel only released the specifications for the USB and SATA host controllers once Intel had completed development and was ready to ship Intel products incorporating the specification.

Intel controls compliance testing of industry standards which it controls. Through compliance testing, Intel can further control the time-to-market of competitors' products. With some standards, such as the USB host controller specification, Intel's competitors must bring their products into Intel labs to certify compliance with standards that Intel controls. Intel obtains competitively sensitive information regarding competitors' products during compliance testing. Specifications for which Intel controlled compliance testing include the USB and SATA host controller specifications, and HDCP (High Definition Content Protection) for DisplayPort.

Intel has also made representations to prevent the industry from developing open standards competitive to those which it controls. **REDACTED**

**Interrogatory No. 6**

**Identify every act, omission, practice, instance, document, and/or communication that you contend supports your claim that “Intel paid or otherwise induced suppliers of complementary software and hardware products to eliminate or limit their support of non-Intel CPU products” or “to change” their product designs “to favor Intel's CPUs.”**  
Compl. ¶¶ 9, 73.

**Response to Interrogatory No. 6**

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages and expert discovery has yet to begin. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Intel has exclusive arrangements with third-party software vendors to cause them to offer products that offer degraded performance or limited feature sets when run on computers with non-Intel CPUs. For example, Intel promised marketing assistance and other benefits to Skype in return for Skype's agreement to disable features of its software when operated on computers with non-Intel CPUs. Skype 2.0 allows a voice conference call for up to ten-way conference calls on selected Intel dual core CPUs, while users of non-Intel based computers with similar processing capability were limited to only five-way conference calls even though technically they were able to do so.

Intel has induced third parties to delay their products or to change the specifications in order for Intel to comply with the requirements. For example, AMD was able to satisfy

Microsoft's original requirements for the Microsoft Vista ready logo. Intel was not able to satisfy the graphics driver requirement and therefore sought to convince Microsoft to change the required specifications.

**Interrogatory No. 7**

**Identify every act, omission, practice, instance, document, and/or communication that you contend supports your claim that Intel "entered into anticompetitive arrangements with the largest computer manufacturers that were designed to limit or foreclose the OEMs' use of competitors' relevant products," including your claims that "Intel threatened to and did increase prices, terminate product and technology collaborations, shut off supply, and reduce marketing to support to OEMs that purchased too many products from Intel's competitors" and that "some OEMs that purchased 100 percent or nearly 100 percent of their requirements from Intel were favored with guarantees of supply during shortages, indemnification from intellectual property litigation, or extra monies to be used in bidding situations against OEMs offering a non-Intel product." Compl. ¶ 6**

**Response to Interrogatory No. 7**

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages. Complaint Counsel also reserves the right to supplement this response because some or all of the relevant responses may be the subject of expert discovery. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Complaint Counsel contends that Intel entered into anticompetitive arrangements with the world's largest original equipment manufacturers ("OEMs") – including Dell, Hewlett-Packard,

Compaq, IBM, Gateway, Lenovo, Acer, Toshiba, Sony, NEC, Fujitsu, and Samsung – that were designed to limit or foreclose the OEMs’ use of competitors’ relevant products. Intel used incentives and threats to: (1) maintain its CPU monopoly against the threats that began to emerge in 1999 from AMD, Transmeta, Via and others; and (2) attempt to acquire a second monopoly in the adjacent chipset and/or graphics chipset market. One set of examples are the exclusive arrangements Intel had with Dell, IBM, Lenovo, Gateway, Samsung, Sony and Toshiba that ensured those OEMs were exclusive to Intel across their entire product portfolios. A second set of examples are the exclusive arrangements Intel had with Acer, Hewlett Packard, Lenovo, NEC, Toshiba, and other OEMs for specific markets or geographic segments. A third set of examples are the market share arrangements Intel reached with Acer, Fujitsu, Hewlett-Packard, NEC, and other OEMs to limit the use of competitive CPUs. A fourth set of examples are Intel’s arrangements with OEMs to cancel or delay platforms using non-Intel CPUs. A fifth set of examples are Intel’s arrangements with OEMs that bundled the purchase of CPUs with chipset purchases. These arrangements had the purpose and effect of foreclosing or limiting the adoption of non-Intel CPUs and chipsets by Tier One OEMs. Intel also threatened OEMs that considered purchasing non-Intel CPUs or participating in marketing events with non-Intel CPU suppliers.

REDACTED

Complaint Counsel’s contentions that Intel entered into anticompetitive arrangements with the world’s largest OEMs are supported by the following examples:

**Dell.** Intel engaged in exclusionary conduct by entering into exclusive dealing arrangements with Dell. Dell purchased CPUs for use in netbooks, commercial desktops, consumer desktops, commercial notebooks, consumer notebooks, workstations, and servers.

Dell was the world's largest OEM between 2000 and 2006. Dell slipped to number two shortly after it introduced a single AMD server and Intel withdrew significant financial support. Today Dell is the third largest OEM worldwide after Hewlett-Packard and Acer.

Dell purchased CPUs exclusively from Intel for 20 years. The contemporaneous business documents REDACTED confirm the exclusive nature of the relationship throughout much of the relevant time period. Intel REDA executives routinely used terms like exclusive, monogamy, and loyalty to describe REDACTED In exchange for Dell's exclusive commitment, Intel gave Dell billions of dollars, "special" support to help Dell reach financial targets, priority supply, advance access to Intel's product roadmaps, first-at-the-table engineering support, indemnification from intellectual property liability stemming from the Intergraph dispute, and other financial and non-financial benefits that were conditioned on exclusivity. Intel also reached arrangements to limit Dell's adoption and marketing of AMD products once Dell finally decided to introduce AMD in mid-2006.

Intel threatened to withhold many of these benefits if Dell developed a computer using a non-Intel CPU. REDACTED

Complaint Counsel's contentions that Intel entered into exclusive arrangements with Dell are supported by the following examples:

Mother of All Programs ("MOAP") Agreement (Summer 2001). Intel provided Dell with significant financial and non-financial benefits in return for Dell's exclusive commitment to Intel prior to 2001. In Spring 2001, REDACTED



REDACTED

Intel wanted to ensure that the world's largest OEM would remain exclusive to Intel. Intel and Dell agreed on a "mutually beneficial, systemic, and scalable" program, dubbed the Mother of All Programs (MOAP), to ensure that Dell remained exclusive with Intel. Intel agreed to pay Dell a lump sum of money at the end of each quarter to remain exclusive to Intel. The payment was set at 5.7% of *all* Dell's purchases. This constitutes a bundled rebate for all of the products Dell purchased from Intel: CPUs used in consumer desktops, CPUs used in commercial desktops, CPUs used in notebooks, CPUs used workstations, CPUs used in servers, motherboards, chipsets, wireless devices and other equipment. In return, Dell agreed that it would not introduce products using non-Intel CPUs.

Summer 2002. Intel and Dell renegotiated their exclusive relationship in summer 2002. In return for Dell's continued commitment to purchase CPUs and chipsets exclusively from Intel, Intel promised to increase Dell's rebates from 5.7% to 6.3% of Dell's total spend with Intel, supply guarantees, supply hubs, and purchase Dell servers and other equipment. Intel also asked Dell to declare that they were no longer evaluating AMD's new server CPU, Opteron. On September 18, 2002, Dell told AMD it was no longer considering a Opteron server. RED

REDACTED

DL 315 Bid Bucket. On August 19, 2002, HP announced that it was launching a new AMD-based commercial desktop product called the Compaq D315. On that same day, Dell's Glenn Neland told Intel "I would think you guys would want to play in a big way with us to make sure we don't end up in the same place some of our competitors are going." REDAC

REDACTED

REDACTED

Intel told Dell that it would not “do anything immediate (next week or two) against HPQ (pulling funds that they agreed to give them as part of the original deal)” but that it would work with Dell to punish HP. In September 2002, Dell received additional funding from Intel to ensure that HP’s D315 AMD-based commercial desktop did not gain traction in the marketplace.

Fall 2003 Agreement (MCP II). Craig Barrett and Michael Dell shook hands on an agreement that reaffirmed Dell’s exclusive relationship with Intel in fall 2003. Intel agreed to increase its payments to Dell from 6.3% to 7% of Dell’s total purchases from Intel – nearly \$200 million a quarter. Other benefits included in the deal were a \$40 million payment from Intel to help Dell’s financial quarter and an agreement by Intel to indemnify Dell against potential liability stemming from Intel’s intellectual property dispute with Intergraph. Two days after the handshake agreement,

REDACTED

March 2004 Agreement (MCP III). In March 2004, Intel agreed to increase its payments to Dell. The lump sum paid to Dell at the end of each quarter would equal 14% of Dell’s total spend with Intel.

REDACTED

Intel’s analysis suggested that Dell would need to sell an additional 18-20 million computers per year – doubling its unit growth – to recapture the \$1 billion per year in Intel payments that Dell would potentially forfeit if it adopted AMD.

December 2004/January 2005 Agreement. Intel and Dell entered into an addendum to the MCP program that would run from December 1, 2004, through January 30, 2006. Intel agreed to an additional \$300 to \$400 million of incremental funding on top of the existing MCP

agreement. Dell agreed to remain exclusive with Intel and publicly distanced itself from AMD in February 2005.

May 2006. Dell told Intel that it planned to incorporate AMD in all lines of business. Intel's reaction is summed up in an e-mail from its Chairman Craig Barrett to its CEO Paul Otellini: "Not a time for weakness on our part. Stop writing checks immediately and put them back on list prices ASAP." In an internal email to his staff, Mr. Otellini stated that Intel should be "prepared to remove all MCP and related programs. Post haste."

At the same time, Intel worked to limit the scope and pace of Dell's adoption of AMD. Intel offered \$120 million in additional funds to fix the profitability of Dell's first quarter and agreed on several other issues. First, Intel agreed to increase its payments to Dell for the second quarter by another \$150 million. Second, Intel agreed to allow Dell to announce a limited AMD-based server, but in return, Dell had to agree to deliver two messages: (1) a full-fledged endorsement of Intel's new products and (2) no wiggle room in Dell's statements for anyone to "construe that there would be additional offerings beyond [an AMD Opteron multi-processor] server." Dell announced on May 18th that it would introduce a single AMD server in the fall 2006. Intel felt Dell had breached their agreement despite the fact that the reference to AMD was limited to a single line in a quarterly financial call. Art Roehm told Dell that Intel considered "the deal off."

REDACTED

Intel's payments to Dell dropped precipitously even before Dell introduced its AMD server.

**Toshiba.** Toshiba Corporation is a Tier One OEM with a significant worldwide presence in the consumer and commercial notebook segment. Complaint Counsel contends that Intel entered into anticompetitive arrangements with Toshiba to limit or foreclose Toshiba's use of

non-Intel CPUs and chipsets. Intel reached an exclusive arrangement with Toshiba that foreclosed the adoption of non-Intel CPUs and chipsets. Intel also pressured Toshiba to delay or cancel non-Intel based personal computers.

Intel secured an exclusive commitment from Toshiba in 2000. In the first half of 2000, Toshiba purchased approximately 25% of its CPUs from AMD. Intel recognized that “Tosh is strategically important to AMD . . . because of the entrance possibilities into Japan,” “where new technology starts.” To eliminate the Toshiba/AMD strategic partnership, Intel provided Toshiba with financial and non-financial benefits conditioned on Toshiba’s commitment to purchase CPUs exclusively from Intel. In summer 2000, Toshiba terminated all of its AMD designs and agreed to limit the adoption of Transmeta to the Japanese market. Intel and Toshiba reaffirmed their exclusive arrangement in early 2001 and the arrangement lasted through 2007. Intel gave Toshiba hundreds of millions of dollars, priority CPU supply, engineering support, early product samples, supply line management support, marketing support and other support in return for Toshiba’s commitment to purchase CPUs exclusively from Intel during that time. Intel also gave Toshiba money to help it meet financial earnings targets in 2003 as a token of appreciation for Toshiba’s loyalty to Intel.

Toshiba renewed its commitment to purchase CPUs exclusively from Intel in December 2003. In 2003, Intel agreed to a “Dell like” program for Toshiba in return for Toshiba’s continued commitment to purchase CPUs and chipsets exclusively from Intel. Intel offered Toshiba a bundled rebate of approximately 12% across all of Toshiba’s purchases from Intel (which Intel valued at \$140 million in 2004 or \$35 million a quarter). Intel agreed to front load the payments in the first quarter of 2004 in order to help Toshiba meet its financial earnings targets. Intel also committed to continue its supply and engineering support of Toshiba.

Intel pressured Toshiba to limit its deployment and marketing of Transmeta based notebooks. Toshiba worked with Transmeta and had developed a prototype notebook to demonstrate at tradeshow in 2000. Toshiba pulled the Transmeta product after Intel “played the ‘relationship’ card” in the summer of 2000. After Toshiba disclosed its plans to launch a Transmeta notebook in 2001, Intel warned Toshiba that if it brought that product to the United States it would violate Toshiba’s “commitment” to Intel. In June 2001, Toshiba confirmed to Intel that it would not bring the Transmeta product to the United States because it did not want to risk losing the financial and non-financial benefits it received from Intel.

**IBM.** IBM was one of the world’s largest computer manufacturers between 1999 and 2005. It sold commercial desktops, consumer desktops, commercial notebooks, consumer notebooks, workstations, and servers. In 2005, IBM sold its desktop and notebook business to Lenovo. IBM sold only servers and workstations after May 2005. Intel entered into a series of agreements with IBM to ensure that IBM’s commercial PC business was Intel exclusive. Intel also pressured IBM to refrain from fully marketing its AMD server products. For example, Intel explicitly and implicitly threatened reprisals against IBM if it used non-Intel CPUs.

Intel’s Exclusive Arrangements with IBM’s Commercial PC Business. REDACTED

Intel paid IBM millions of dollars from Q2 2000 to Q1 2001 to keep IBM “100% Intel in our commercial product offerings.” As part of the agreement with IBM, Intel agreed to pay IBM \$18 million per quarter, regardless of volumes IBM purchased. During the negotiations to ensure IBM’s commercial business remained exclusive to Intel, Intel told IBM that a decision to introduce an AMD computer would lead Intel to increase its support of IBM’s competitors to target IBM sales

opportunities, risk the future of a cross-license agreement between IBM and Intel, and reduce its financial support of IBM.

In mid-2001,

REDACTED

Intel and IBM agreed to a “strategic relationship” spanning five quarters. IBM agreed to remain exclusive to Intel in return for \$100 million and non-financial benefits from Intel, including IBM preferred product placements at Intel shows and launch events, and IBM as a preferred partner on all new Intel fulfillment/logistics programs.

REDACTED

“Fano.” REDACTED

REDACTED

Intel agreed to pay IBM \$3.9 million per quarter, for four quarters, to keep IBM from using AMD in commercial desktops. From 2003 through 2005, Intel made similar quarterly payments to keep IBM from using AMD microprocessors in REDACTED desktops such as “Barnstable” and “Iceland.” These projects were abandoned after IBM concluded REDACT

REDACTED

Intel pressured IBM to cancel a Transmeta consumer notebook. In summer of 2000, IBM demonstrated a consumer notebook with a Transmeta CPU. IBM planned a commercial release of the product in Fall 2000. Intel pressured IBM to drop the Transmeta product. IBM announced the cancellation of the Transmeta notebook in September 2000 after Intel agreed to increase its payments to IBM in late August 2000.

Intel pressured IBM to limit its distribution and marketing of its Opteron e325 Server. IBM was the first OEM to develop a server using AMD’s Opteron CPU (“e325”) and it was the only Tier One OEM to appear at AMD’s launch event for Opteron in April 2003. However,

IBM sold the e325 only in the high performance segment of the market REDACTED

REDACTED

An Intel representative reported “starting to intimate to them [IBM] that this progress does get jeopardized with the continued momentum on the AMD front and I believe they are taking notice of this reality.” To assuage Intel, IBM agreed that it would only develop a single Opteron and that it would focus the product on the high performance computing segment. Intel documents reflect the agreement that IBM agreed that it would “lead with Intel and only reactively play Opteron.” That is, it would only offer the e325 to customers that specifically asked about it.

REDACTED

Intel pressured IBM to cancel an AMD 4-Way Server product in Spring 2004. In early 2004, IBM developed a 4-socket Opteron server, REDACTED

Intel’s goal was to

REDACTED Intel agreed to pay IBM \$130 million over three quarters, a time to market advantage on Intel’s 64-bit extensions, and other “unique” benefits to ensure IBM remained exclusive to Intel in the 4-socket server segment and that IBM cancel the REDACT

Intel pressured IBM to limit its distribution and marketing of its Opteron Blade Server.

In late 2004,

REDACTED

Pursuant to

the terms of the BladeCenter Collaboration, IBM made an exception request to Intel based on market demand for Opteron blade servers containing technology that Intel could not provide. Intel refused. Intel also repeatedly threatened IBM that if it developed an AMD-based blade server, Intel would pull various sources of support, including BladeCenter Collaboration funding, Hurricane chipset funding, other payments and roadmap support. In March 2005, Intel allowed IBM to introduce an Opteron-based blade server in exchange for IBM's commitment to limit the distribution and marketing of the AMD server such that: (1) the Opteron-based blade server would not be branded IBM; (2) IBM would only sell the blade reactively to customers who specifically asked for it; and (3) IBM would not market or advertise the product. This server, known as the IBM LS20 BladeCenter, was released in July 2005. REDACT it was not until 2006 that IBM released a full suite of AMD-based servers and sold AMD servers and Intel servers under the x-series.

**Hewlett-Packard.** Hewlett-Packard ("HP") is the world's largest supplier of computers today – a position it won from Dell in 2006. Intel reached market share arrangements with HP that limited or foreclosed the adoption of non-Intel CPUs and chipsets. Intel also pressured HP to delay or cancel non-Intel based personal computers.

Intel entered into near-exclusive arrangements with Hewlett-Packard in the commercial desktop and commercial notebook markets. Intel also threatened HP throughout the relevant time period. For example, Intel demanded that supporters of AMD-based products be fired, threatened to withdraw support for Itanium, refused to offer *any* rebate for certain periods of time, threatened to withdraw rebate money, suspended negotiations on rebate deals, demanded HP make changes to its own press releases to diminish the positive publicity for AMD, suspended CPU and chipset shipments, and slowed its commitments on product refreshes.



REDACTED HP entered into near exclusive agreements that Intel which required HP to purchase 95% of its microprocessors for use in commercial desktops and notebooks from Intel, to limit marketing and distribution of AMD products, and to restrict branding. For example, in addition to requiring HP to purchase at least 95% of its microprocessors from Intel, HP's commercial desktop agreements required that: (1) HP not sell the AMD desktop product through the indirect sales channel REDACTED

(2) HP not quote AMD products in response to a request for proposal unless the customer specifically asked for AMD REDACTED

and (3) HP not brand AMD products with HP's EVO brand which was associated with high quality in the commercial channel. In exchange for accepting with these restrictions, HP received hundreds of millions of dollars plus other assurances from Intel.

Intel punished Hewlett-Packard for its adoption and promotion of AMD Opteron servers. HP launched Opteron servers in early 2004. Intel's then-CEO Barrett responded with a suggestion that a "period of shortness of supply or Intel working closely with others will change the situation." REDACTED

Intel used its formidable enterprise customer marketing arm to call on HP customers and try to convince them to switch to Dell servers. Intel threatened to withdraw support for Itanium. RE REDACTED

From early 2005 to mid-2006, HP experienced shortages of Intel CPUs and Intel chipsets for its commercial

mobile and commercial desktop businesses.

REDACTED

REDACTED

**Acer.** Acer is now the world's second largest OEM – a position it assumed from Dell in December 2009. Acer's business is focused on netbooks, notebooks, and desktops although it does have a small server business. Intel reached market share arrangements with Acer that limited or foreclosed the adoption of non-Intel CPUs and chipsets. Intel also pressured Acer to delay or cancel non-Intel based personal computers.

Intel secured market share agreements with Acer to limit its adoption of non-Intel CPUs and chipsets. Acer was exclusive to Intel before Acer launched two AMD-based notebook products in Europe in the fall of 2002. In January 2003, Acer and Intel reached a "Mega Deal" whereby Acer committed it would continue to be Intel exclusive in the American and Asian markets and that it would be Intel exclusive worldwide by the fourth quarter of 2003. Acer also agreed to forgo an AMD K8 notebook altogether and delay any development of an AMD K8 desktop product. In exchange, Intel agreed to give Acer tens of millions of dollars, supply guarantees and support, technical support, and marketing support. Intel briefing materials for a meeting with Acer discussed the January 2003 agreement and emphasized the conditional nature of the Intel benefits: "Continue to highlight to [Acer's] Jim [Wong] that we still have a lot of

technology and marketing engagements waiting to kick off with Acer after the management of both sides sealed the Executive Agreement early this year but need Acer's 100% IA line-up ASAP (Jim committed 100% starting Q3 '03)." In the second quarter of 2003, Intel reported that Acer was on track to fulfill its exclusive commitment: "Acer has indicated that their Intel purchase plan will support  $\geq 92\%$  of their total CPU requirements and  $\geq 86\%$  of the [chipset requirements] on platforms using Intel CPUs." Acer purchased more than 95% of its CPU requirements and 90% of its chipsets by the fourth quarter of 2003.

Intel pressured Acer to cancel its participation in an AMD launch event. In August 2003, Intel learned that Acer was planning on participating in AMD's launch of its new PC CPU, Athlon 64. Intel was prepared to reduce its payments to Acer by half and to reduce CPU and chipset samples support if Acer participated in the AMD event. Acer ultimately REDACTED withdrew from the AMD launch event and cancelled plans for introducing an Athlon 64 computer. In return, Intel promised Acer that no other Tier One OEM would launch an Athlon 64 computer. Acer released an Athlon 64 product six months later. Intel believed Acer had violated its commitment to Intel. However, Acer's Jim Wong told Intel that Acer's "action was fully in compliance with our original commitment that we won't be the leading major brand, i.e., should be behind HP, however, as HP announced during last Comdex that Feb. 11 will be the date they will ship K8 notebook to customers, therefore Acer planned for week Feb. 15<sup>th</sup> delivery. . . Unfortunately, HP suddenly delayed their launch, but Acer's production plan has to be prepared 2 months, at least, before the date been set so can't stop now . . . Acer will stop both flyers and advertisements for any Acer sub-brand K8 notebook worldwide from now on."

Intel retaliated when Acer released an AMD based notebook in India in December 2003. Intel discussed various punishments including reducing by half its payments to Acer and reducing the number of CPU samples it gave to Acer.

**Lenovo.** Lenovo (also referred to as Legend) was a regional notebook and desktop OEM with a very small presence outside of Asia before 2004. Lenovo's acquisition of IBM's personal computer division in early 2005 transformed the company. Most of Lenovo's sales are in the consumer desktop and notebook markets and the commercial desktop and notebook markets. It has also developed a small presence in servers. Intel reached exclusive arrangements with Lenovo that limited or foreclosed the adoption of non-Intel CPUs and chipsets. Intel also pressured Lenovo to delay or cancel non-Intel based personal computers.

Intel secured market share agreements with Lenovo to limit its adoption of non-Intel CPUs and chipsets. Lenovo purchased CPUs exclusively from Intel prior to June 2004 in return for financial and non-financial benefits. In June 2004, Lenovo introduced an AMD desktop in China. Intel responded by withdrawing all of its payments to Lenovo for desktop and charging Lenovo list prices on desktops in the third quarter of 2004. Intel took this action despite the fact that Intel maintained a dominant share of Lenovo's desktop business. In fall 2004, Intel secured a commitment from Lenovo to increase Intel's share of Lenovo's desktop business to 80% in the fourth quarter of 2004. Lenovo also agreed to restrict its marketing and advertising of non-Intel based products.

Intel secured Lenovo's commitment to continue to purchase CPUs exclusively from Intel for its notebook segment and cancel the AMD notebook in summer 2006. REDACTED

REDACTED

Yet Lenovo twice postponed,

and ultimately canceled, its AMD notebooks, in return for financial and non-financial benefits from Intel that were conditioned on Lenovo's exclusivity in its notebook segment.

Lenovo began development of an AMD notebook in late 2005. REDACTED

Once Intel learned of AMD's notebook plans in February 2006, Intel contemplated eliminating all payments to Lenovo for six months. In April 2006, Lenovo promised it would not launch an AMD notebook for at least six months.

In mid-2006, Intel secured a commitment from Lenovo that it would not introduce an AMD based notebook in 2006. REDACTED

At the end of 2006, Intel secured Lenovo's commitment to continue its exclusive arrangement on notebooks and purchase at least 80% of its desktop CPU requirements from Intel in 2007. In return Intel agreed to pay Lenovo over \$100 million, and to provide marketing, engineering, and supply line management support. REDACTED

## REDACTED

Lenovo did not offer any AMD notebook product in 2007.

NEC. During the relevant time period, NEC was a Tier One OEM that sold desktops and notebooks to both the consumer and commercial markets. It also had a small server presence. Intel reached market share arrangements with NEC that limited or foreclosed the adoption of non-Intel CPUs and chipsets. Intel also pressured NEC to delay or cancel non-Intel based personal computers.

NEC bought CPUs exclusively from Intel throughout much of the late 1990s. AMD's release of its Athlon CPU in 1999 led NEC to pursue a dual-source strategy.

Intel secured an exclusive commitment for NEC's commercial business in 2000. In the third quarter of 2000, Intel and NEC reached a "gentleman's agreement" whereby NEC agreed that it would use Intel exclusively in NEC's commercial markets. In return, Intel agreed to increase its payments to NEC. This agreement lasted at least through the end of 2003.

Intel secured a market share commitment in NEC's consumer segment ("Realignment Plan") in 2002. NEC increased its sales of AMD-based consumer desktops and notebooks in 2001 and 2002. Intel retaliated in early 2002 by withholding payments to NEC and returning NEC to list prices for consumer desktops. In May 2002, Intel obtained a commitment from NEC to purchase 80% of its worldwide CPU requirements from Intel. NEC's commitment was in exchange for increased Intel payments to NEC, supply guarantees, and other support from Intel. Intel conditioned these benefits on NEC hitting the market share targets: "[r]econfirmed Q4 MDF criteria is based on MSS [market share], not volume." Intel tracked its market share at

NEC and NEC was required to report its sales to Intel in exchange for the payments. RE

## REDACTED

From 2002 until 2005, Intel rebates to NEC were conditioned on NEC buying 80% of its CPUs from Intel.

Intel secured a commitment from NEC to delay the launch of an AMD product. In April 2003, Intel paid NEC to delay launching an Athlon computer until two months after the Centrino launch. An Intel employee stated that Intel's "game plan is to negotiate on elimination of" the Athlon-based SKU, but asked the recipient of the email to "please trash this message after you read, as I know I am using sensitive words." NEC eventually cancelled the AMD notebook altogether.

**Sony.** Sony is considered a Tier One notebook OEM and technology leader. Intel reached market share arrangements with Sony that limited or foreclosed the adoption of non-Intel CPUs and chipsets.

Intel secured a market share commitment from Sony in the notebook segment in 2002. In 2002, Sony committed that it would purchase over 80% of its notebook processors from Intel in return for financial and non-financial benefits from Intel. This included an Intel market share requirement for Sony's U.S. notebook processor purchases for the fall/holiday 2002 season: "US MSS re-commitment Sony management made . . . was 80%." Intel ultimately paid \$23.85 million "as part of overall agreement for 82-85% MSS [market share]." Intel monitored Sony's compliance. In the spring of 2003, in Sony purchased 77% of its notebook CPUs from Intel. Intel's Sony account representative suggested Intel rescind its summer 2003 rebate if Sony "breaks [its] MSS commitment." Shortly after, Sony's purchases of Intel microprocessors for its

notebook products increased. Intel was satisfied: “So in terms of the end result for the business itself for that summer refresh, . . . [Sony] only used Intel products. That was a fact.”

Intel secured an exclusive commitment from Sony in the desktop segment in 2002. In September 2002, Intel asked Sony to become 100% Intel for its VAIO desktop line in the United States. Sony agreed to “100% MSS [market share] in Japan for Q1-Q3’03” as a condition for the pricing Intel offered. Intel retained the option to pull Sony’s rebate if “they [did] not live up to their side of the bargain.”

Intel secured an exclusive commitment from Sony across all market segments in 2003. Intel and Sony signed a Letter of Intent for “100% on dt and nbs,” otherwise known as “full alignment” in July 2003. In the fall/winter of 2003, Intel paid Sony \$39.8 million in rebates in exchange for “Sony’s worldwide top-to-bottom alignment with Intel.” Sony acknowledged the existence of its obligation to use 100% Intel for one year, but noted that it could not be explicitly stated in the Letter of Intent for legal reasons. The Letter of Intent automatically renews annually unless cancelled by either party, which has not happened. **REDACTED**

Through 2006 and 2007, under the meet comp program, Sony received hundreds of millions of dollars from Intel and remained 100% Intel exclusive.

**Fujitsu.** Fujitsu is a Tier One OEM that sold notebooks, desktops, and servers during the relevant time period. Intel negotiated market share agreements and exclusive dealing arrangements with Fujitsu that limited or foreclosed the adoption of non-Intel CPUs and chipsets. Intel also pressured Fujitsu to delay or cancel non-Intel based personal computers.



In February 2002, Intel secured Fujitsu's commitment to purchase CPUs exclusively from Intel in exchange financial and non financial benefits.

In February 2003, Intel offered additional funding if Fujitsu agreed to one of three conditions: (1) Fujitsu would not use Athlon XP at all; (2) Fujitsu would not launch any Athlon XP notebook products in the U.S., but only in Japan and only for retail; or (3) Fujitsu would not market any notebook with Athlon XP in Japan and would launch the Athlon XP notebook only in the U.S. Intel reached an agreement whereby Fujitsu Japan and Fujitsu USA would not launch the Athlon XP notebook in the commercial segment, and Fujitsu Siemens would not use Athlon XP in any notebook SKU.

**Sun.** Sun was a Tier One server and workstation OEM during the relevant time period. Sun released an AMD Opteron server in early 2004 much to Intel's displeasure. Intel wanted to limit or foreclose Sun's use of AMD CPUs. Intel's actions were designed to stymie the success AMD experienced with the release of Opteron: **REDACTED**

**Apple.** Apple is a Tier One notebook and desktop OEM during the relevant time period. Apple was the only OEM that sold notebooks or desktops that used a non-x86 CPU. In March 2005, Apple signed an exclusive agreement with Intel. Apple abandoned PowerPC and agreed to use only x86 CPUs going forward. In return, Intel provided Apple with money (including lump

sum payments totaling \$600M) and non-monetary benefits in exchange for exclusivity until at least January 31, 2010. In so doing, Intel prevented AMD from competing for Apple's business for at least four years. The agreement between Intel and Apple expressly commits Apple to "not purchase microprocessors for use in its Macintosh Product Families from anyone other than Intel through January 31, 2010," with the exception of Power processors.

**Gateway.** Gateway is owned by Acer today. Gateway has historically focused on desktops and notebooks. Intel made payments to Gateway conditional on exclusionary requirements. For example, Gateway cancelled launches of AMD based personal computers in 1999 and 2001 **REDACTED**

In 1999, Gateway developed an AMD K7 personal computer. After Intel learned of the product, it offered Gateway \$20 million and compensation for development costs to cancel the launch of the AMD personal computer. Gateway accepted Intel's offer and cancelled the product.

In 2001, Intel reached an agreement with Gateway whereby Gateway agreed to purchase CPUs exclusively from Intel in return for increased payments and other financial and non-financial support from Intel. Gateway purchased CPUs exclusively from Intel through 2003.

**Compaq.** Compaq was a Tier One OEM that sold notebooks, desktops, and servers. Hewlett Packard acquired Compaq in 2002. Prior to its acquisition, Compaq's commercial desktop and notebook businesses were exclusive to Intel. Intel also pressured Compaq to cancel non-Intel based personal computers. For example, Compaq abandoned plans to develop and market an AMD commercial desktop in 2000 after Intel suggested it would withhold technical information and supply if Compaq adopted AMD. In fall 2000, Compaq cancelled an AMD-based workstation after Intel promised to increase its payments to Compaq.

**Samsung.** Samsung is the largest seller of desktops and notebooks in Korea. It also sells product in the United States. Intel conditioned significant payments and other benefits in return for Samsung's commitment to purchase CPUs exclusively from Intel between fall 2002 and spring 2005.

In early 2002, Samsung introduced AMD-based desktops and notebooks into its product line-up. The decision to introduce the products came after Intel offered Samsung \$8 million in 2002 to cancel the AMD PCs. In response to Samsung's AMD-based PCs, Intel reduced its payments to Samsung in the first quarter of 2002. Intel paid Samsung \$750,000 in the first quarter as compared to \$4 million a quarter in 2001 when Samsung was exclusive to Intel. Intel reduced its payments to Samsung despite the fact that Samsung bought more from Intel in the first quarter of 2002 than two of the quarters in 2001.

In Summer 2002, Intel proposed a "Long Term Support Plan" to Samsung. Intel offered \$3.4 million payments over the second half of 2002 and other financial support in return for Samsung's commitment to "[d]rop all AMD products from Samsung's Line-up in Q3." Samsung accepted Intel's offer and ceased its purchases of AMD CPUs. Samsung remained exclusive to Intel through the third quarter of 2005.

**Interrogatory No. 8**

**Identify every act, omission, practice, instance, document, and/or communication that you contend supports your claim that "Intel offered market share or volume discounts selectively to OEMs to foreclose competition in the relevant CPU markets." Compl. ¶ 7.**

**Response to Interrogatory No. 8**

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this

interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages. Complaint Counsel also reserves the right to supplement this response because some or all of the relevant responses may be the subject of expert discovery. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Complaint Counsel contends that Intel entered into anticompetitive arrangements with the world's largest OEMs – including Dell, Hewlett-Packard, Compaq, IBM, Gateway, Lenovo, Acer, Toshiba, Sony, NEC, Fujitsu, and Samsung – that were designed to limit or foreclose the OEMs' use of competitors' relevant products. Intel used incentives and threats to: (1) maintain its CPU monopoly against the threats that began to emerge in 1999 from AMD, Transmeta, Via and others; and (2) acquire a second monopoly in the adjacent chipset and/or graphics chipset market. One set of examples are the exclusive arrangements Intel had with Dell, IBM, Lenovo, Gateway, Samsung, Sony and Toshiba that ensured those OEMs were exclusive to Intel across their entire product portfolios. A second set of examples are the exclusive arrangements Intel had with Acer, Hewlett-Packard, Lenovo, NEC, Toshiba, and other OEMs for specific markets or geographic segments. A third set of examples are the market share arrangements Intel reached with Acer, Fujitsu, Hewlett-Packard, NEC, and other OEMs to limit the use of competitive CPUs. A fourth set of examples are Intel's arrangements with OEMs to cancel or delay platforms using non-Intel CPUs. A fifth set of examples are Intel's arrangements with OEMs that bundled the purchase of CPUs with chipset purchases. These arrangements had the purpose and effect of foreclosing or limiting the adoption of non-Intel CPUs and chipsets by Tier One

OEMs. Complaint Counsel's contentions that Intel entered into anticompetitive arrangements with the world's largest OEMs are supported by the following examples:

**Dell.** Intel engaged in exclusionary conduct by entering into exclusive dealing arrangements with Dell. Dell purchased CPUs exclusively from Intel for 20 years. The contemporaneous business documents of both companies confirm the exclusive nature of the relationship throughout much of the relevant time period. Intel REDACTED routinely used terms like exclusive, monogamy, and loyalty REDACTED

In exchange for Dell's exclusive commitment, Intel gave Dell billions of dollars, "special" support to help Dell reach financial target, priority supply, advance access to product roadmaps, first-at-the-table in engineering support, indemnification from intellectual property liability stemming from the Intergraph dispute, and other financial and non-financial benefits that were conditioned on exclusivity. Intel also reached arrangements to limit Dell's adoption and marketing of AMD products once Dell finally decided to introduce AMD in mid-2006.

Intel threatened to withhold many of these benefits if Dell developed a computer using a non-Intel CPU. REDACTED

Intel's

exclusive arrangements with Dell are supported by the following examples:

Mother of All Programs ("MOAP") Agreement (Summer 2001). Intel provided Dell with significant financial and non-financial benefits in return for Dell's exclusive commitment to Intel prior to 2001. In Spring 2001, REDACTED

Intel wanted to ensure that the world's largest OEM

would remain exclusive to Intel. Intel and Dell agreed on a “mutually beneficial, systemic, and scalable” program, dubbed the Mother of All Programs (MOAP), to ensure that Dell remained exclusive with Intel. Intel agreed to pay Dell a lump sum of money at the end of each quarter to remain exclusive to Intel. The initial lump sum amount was set at 5.7% of *all* Dell’s purchases. In other words, Dell received a bundled rebate for all of the products it purchased from Intel: CPUs used in consumer desktops, CPUs used in commercial desktops, CPUs used in notebooks, CPUs used workstations, CPUs used in servers, motherboards, chipsets, wireless devices and other equipment. In return, Dell agreed that it would not introduce products using non-Intel CPUs.

Summer 2002. Intel and Dell renegotiated their exclusive relationship in summer 2002. In return for Dell’s continued commitment to purchase CPUs and chipsets exclusively from Intel, Intel promised to increase Dell’s rebates from 5.7% to 6.3% of Dell’s total spend with Intel, supply guarantees, supply hubs, and to purchase Dell servers and other equipment. Intel also asked Dell to declare that their evaluation of AMD’s new server CPU, Operton, was over. On September 18, 2002, Dell pulled the plug on its AMD project.

Fall 2003 Agreement (MCP II). Craig Barrett and Michael Dell shook hands on an agreement that reaffirmed Dell’s exclusive relationship with Intel in fall 2003. Intel agreed to increase its payments to Dell from 6.3% to 7% of Dell’s total purchases from Intel – nearly \$200 million a quarter. Other benefits included in the deal were a \$40 million payment from Intel to help Dell’s financial quarter and an agreement by Intel to indemnify Dell against potential liability stemming from Intel’s intellectual property dispute with Intergraph. Two days after the handshake agreement,

REDACTED

March 2004 Agreement (MCP III). In March 2004, Intel agreed to increase its payments to Dell. The lump sum paid to Dell at the end of each quarter would equal 14% of Dell's total spend with Intel.

REDACTED

Intel's analysis suggested that Dell would need to sell an additional 18-20 million computers per year – doubling its unit growth – to recapture the \$1 billion per year in Intel payments that Dell would potentially forfeit if it adopted AMD.

December 2004/January 2005 Agreement. Intel and Dell agreed to an additional \$300 to \$400 million of incremental funding on top of the existing agreement in exchange for Dell's commitment to continue to purchase CPUs and chipsets exclusively from Intel. The term of the agreement ran through January 30, 2006. Dell publicly distanced itself from AMD in February 2005.

May 2006. Dell told Intel that it planned to incorporate AMD in all lines of business. The reaction of Intel's Chairman (and former CEO) Craig Barrett summed it up in an email to Intel's CEO Paul Otellini: "Not a time for weakness on our part. Stop writing checks immediately and put them back on list prices ASAP." In an internal email to his staff, Mr. Otellini stated that Intel should be "prepared to remove all MCP and related programs. Post haste."

At the same time, Intel worked to limit the scope and pace of Dell's adoption of AMD. Intel offered additional funds to fix Dell's first quarter (\$120 million) and \$100 million per quarter for the second and third quarters. In the end, Intel and Dell agreed on several issues. First, Intel agreed to increase its payments to Dell for the second quarter by another \$150 million. Second, Intel agreed to allow Dell to announce a limited AMD-based server, but in

return, Dell had to agree to deliver two messages: (1) a full-fledged endorsement of Intel's new products and (2) no wiggle room in Dell's statements for anyone to "construe that there would be additional offerings beyond MP server."

**Toshiba.** Toshiba Corporation is a Tier One OEM with a significant worldwide presence in the consumer and commercial notebook segment. Complaint Counsel contends that Intel entered into anticompetitive arrangements with Toshiba to limit or foreclose Toshiba's use of non-Intel CPUs and chipsets. Intel reached an exclusive arrangement with Toshiba that foreclosed the adoption of non-Intel CPUs and chipsets. Intel also pressured Toshiba to delay or cancel non-Intel based personal computers.

Intel provided Toshiba with financial and non-financial benefits conditioned on Toshiba's commitment to purchase CPUs exclusively from Intel in summer 2000. Toshiba terminated all of its AMD designs and agreed to limit the adoption of Transmeta to the Japanese market. Intel gave Toshiba hundreds of millions of dollars, priority CPU supply, engineering support, early product samples, supply line management support, marketing support and other support in return for Toshiba's commitment to purchase CPUs exclusively from Intel during that time. Intel also gave Toshiba money to help it meet financial earnings targets in 2003 as a token of appreciation for Toshiba's loyalty to Intel.

Toshiba renewed its commitment to purchase CPUs exclusively from Intel in December 2003. In 2003, Intel agreed to a "Dell like" program for Toshiba in return for Toshiba's continued commitment to purchase CPUs and chipsets exclusively from Intel. Intel offered Toshiba a bundled rebate of approximately 12% across all of Toshiba's purchases from Intel (which Intel valued at \$140 million in 2004 or \$35 million a quarter). Intel agreed to front load



the payments in the first quarter of 2004 in order to help Toshiba meet its financial earnings targets. Intel also committed to continue its supply and engineering support of Toshiba.

Intel pressured Toshiba to agree to limit its deployment and marketing of Transmeta based notebooks. Toshiba worked with Transmeta and had developed a prototype notebook to demonstrate at tradeshows in 2000. Toshiba pulled the Transmeta product after Intel “played the ‘relationship’ card” in the summer of 2000. After Toshiba disclosed its plans to launch a Transmeta notebook in 2001, Intel warned Toshiba that if it brought that product to the United States it would violate Toshiba’s “commitment” to Intel. In June 2001, Toshiba confirmed to Intel that it would not bring the Transmeta product to the United States because it did not want to risk losing the financial and non-financial benefits it received from Intel.

**IBM.** IBM was one of the world’s largest computer manufacturers between 1999 and 2005. It sold commercial desktops, consumer desktops, commercial notebooks, consumer notebooks, workstations, and servers. In 2005, IBM sold its desktop and notebook business to Lenovo. IBM sold only servers and workstations after May 2005. Intel entered into a series of agreements with IBM to ensure that IBM’s commercial PC business was Intel exclusive. Intel also pressured IBM to refrain from fully marketing its AMD server products.

Intel’s Exclusive Arrangements with IBM’s Commercial PC Business. REDACTED

Intel paid IBM millions of dollars from Q2 2000 to Q1 2001 to keep IBM “100% Intel in our commercial product offerings.” As part of the agreement with IBM, Intel agreed to pay IBM \$18 million per quarter, regardless of volumes IBM purchased. During the negotiations to ensure IBM’s commercial business remained exclusive to Intel, Intel told IBM that a decision to introduce an AMD based computer would lead Intel to increase its support of IBM’s competitors to target

IBM sales opportunities, risk the future of a cross-license agreement between IBM and Intel, and reduce its financial support of IBM.

REDACTED

Intel and IBM agreed to a “strategic relationship” spanning five quarters. IBM agreed to remain exclusive to Intel in return for \$100 million and non-financial benefits from Intel, including IBM preferred product placements at Intel shows and launch events, and IBM as a preferred partner on all new Intel fulfillment/logistics programs.

In 2002,

REDACTED

“Fano.” REDACTED

REDACTED

Intel agreed to pay IBM \$3.9 million per quarter, for four quarters, to keep IBM from using AMD in commercial desktops. From 2003 through 2005, Intel made similar quarterly payments to keep IBM from using AMD microprocessors in other IBM planned desktops such as “Barnstable” and “Iceland.” These projects were abandoned REDACTED REDACT

REDACTED

Intel pressured IBM to agree to limit its distribution and marketing of its Opteron e325 Server. IBM was the first OEM to develop a server using AMD’s Opteron CPU (“e325”) and it was the only Tier One OEM to appear at AMD’s launch event for Opteron in April 2003. However, IBM sold the e325 only in the high performance segment of the REDACTED

An Intel representative reported “starting to intimate to them [IBM] that this progress does get jeopardized with the continued momentum on the AMD front and I believe they are taking notice of this reality.” REDACTED IBM agreed that it would only develop a single Opteron and that it would focus the product on the high performance computing segment. IBM also promised Intel that it would only sell the e325 server reactively or upon customer request. Intel documents reflect the agreement that IBM would “lead with Intel and only reactively play Opteron.” IBM limited promotional activity of AMD products REDACTED

**Hewlett-Packard.** Hewlett-Packard (“HP”) is the world’s largest supplier of computers today – a position it won from Dell in 2006. Intel reached market share arrangements with HP that limited or foreclosed the adoption of non-Intel CPUs and chipsets. Intel entered into near-exclusive arrangements with HP in the commercial desktop and notebook markets.

HP entered into near exclusive agreements with Intel which required HP to purchase 95% of its microprocessors for use in commercial desktops and commercial notebooks from Intel, to limit marketing and distribution of AMD products, and to restrict branding. For example, in addition to requiring HP to purchase at least 95% of its microprocessors from Intel, HP’s commercial desktop agreements with Intel required that, among other things: (1) HP not sell the AMD desktop product through the indirect sales channel REDACTED

(2) HP not quote AMD products in response to an request for proposal unless the customer specifically requested AMD

REDACTED

; and (3) HP not

brand AMD products with HP's EVO brand which was associated with high quality in the commercial channel. In exchange for complying with these restrictions, HP received hundreds of millions of dollars plus other assurances.

**Acer.** Acer is now the world's second largest OEM – a position it assumed from Dell in December 2009. Acer's business is focused on netbooks, notebooks, and desktops although it does have a small server business. Intel reached market share arrangements with Acer that limited or foreclosed the adoption of non-Intel CPUs and chipsets.

Intel secured market share agreements with Acer to limit its adoption of non-Intel CPUs and chipsets. Acer was exclusive to Intel before Acer launched two AMD-based notebook products in Europe in the fall of 2002. In January 2003, Acer and Intel reached a "Mega Deal" whereby Acer committed it would continue to be Intel exclusive in the American and Asian markets and that it would be Intel exclusive worldwide by the fourth quarter of 2003. Acer also agreed to forgo an AMD K8 notebook altogether and delay any development of a potential AMD K8 desktop product. In exchange, Intel agreed to pay Acer tens of millions of dollars, supply guarantees and support, technical support, and marketing support. Intel briefing materials for a meeting with Acer discussed the January 2003 agreement and emphasized the conditional nature of the Intel benefits: "Continue to highlight to [Acer's] Jim [Wong] that we still have a lot of technology and marketing engagements waiting to kick off with Acer after the management of both sides sealed the Executive Agreement early this year but need Acer's 100% IA line-up ASAP (Jim committed 100% starting Q3 '03)." In the second quarter of 2003, Intel reported that Acer was on track to fulfill its exclusive commitment: "Acer has indicated that their Intel purchase plan will support  $\geq 92\%$  of their total CPU requirements and  $\geq 86\%$  of the C/S req'ts on

platforms using Intel CPUs.” Acer purchased more than 95% of its CPU requirements and 90% of its chipsets by the fourth quarter of 2003.

**Lenovo.** Lenovo (also referred to as Legend) was a regional notebook and desktop OEM with a very small presence outside of Asia before 2004. In 2005, Lenovo’s acquisition of IBM’s personal computer division in early 2005 transformed the company. Most of Lenovo’s sales are in the consumer desktop and notebook markets and the commercial desktop and notebook markets. It has also developed a small presence in servers. Intel reached exclusive arrangements with Lenovo that limited or foreclosed the adoption of non-Intel CPUs and chipsets.

Intel secured market share agreements with Lenovo to limit its adoption of non-Intel CPUs and chipsets. Lenovo purchased CPUs exclusively from Intel prior to June 2004 in return for financial and non-financial benefits. In June 2004, Lenovo introduced an AMD desktop in China. Intel responded by withdrawing all of its payments to Lenovo for desktop and returning Lenovo to list prices on desktops in the third quarter of 2004. Intel took this action despite the fact that Intel maintained a dominant share of Lenovo’s desktop business. In fall 2004, Intel secured a commitment from Lenovo to increase Intel’s share of Lenovo’s desktop business to 80% in the fourth quarter of 2004. Lenovo also agreed to restrict its marketing and advertising of non-Intel based products.

Intel secured Lenovo’s commitment to continue to purchase CPUs exclusively from Intel for its notebook segment and cancel the AMD notebook in summer 2006. Lenovo planned a

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and ultimately canceled, its AMD notebooks,

Yet Lenovo twice postponed,  
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REDACTED

REDACTED

Once Intel learned of AMD's notebook plans in February 2006, Intel contemplated eliminating all payments to Lenovo for six months. In April 2006, Lenovo promised it would not launch an AMD notebook for at least six months.

In mid-2006, Intel secured a commitment from Lenovo that it would not introduce an AMD based notebook in 2006.

REDACTED

At the end of 2006, Intel secured Lenovo's commitment to continue its exclusive arrangement on notebooks and purchase at least 80% of its desktop CPU requirements from Intel in 2007. In return Intel agreed to pay Lenovo over \$100 million, provide marketing and engineering support, and supply line management support.

REDACTED

REDACTED

Lenovo did not offer any AMD notebook product in 2007.

NEC. NEC was a Tier One OEM during the relevant time period that sold consumer and commercial desktops, consumer and commercial notebooks. It also had a small server presence. Intel reached market share arrangements with NEC that limited or foreclosed the adoption of non-Intel CPUs and chipsets. NEC bought CPUs exclusively from Intel throughout much of the late 1990s. AMD's release of its Athlon CPU in 1999 led NEC to pursue a dual-source strategy.

Intel secured an exclusive commitment for NEC's commercial business in 2000. In the third quarter of 2000, Intel and NEC reached a "gentleman's agreement" whereby NEC agreed that it would use Intel exclusively in NEC's commercial markets. In return, Intel agreed to increase its payments to NEC. This agreement lasted at least through the end of 2003.

Intel secured a market share commitment in NEC's consumer segment ("Realignment Plan") in 2002. NEC increased its sales of AMD-based consumer desktops and notebooks in 2001 and 2002. Intel retaliated in early 2002 by withholding payments to NEC and returning NEC to list prices for consumer desktops. In May 2002, Intel obtained a commitment from NEC to purchase 80% of its worldwide CPU requirements from Intel. NEC's commitment was in exchange for increased Intel payments to NEC, supply guarantees, and other support from Intel. Intel conditioned these benefits on NEC hitting the market share targets: "[r]econfirmed Q4 MDF criteria is based on MSS [market share], not volume." Intel tracked its market share at NEC and NEC was required to report its sales to Intel in exchange for the payments.

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From 2002 until 2005, Intel rebates to NEC were conditioned on NEC buying 80% of its CPUs from Intel.

**Sony.** Sony is considered a Tier One notebook OEM and technology leader. Intel reached market share arrangements with Sony that limited or foreclosed the adoption of non-Intel CPUs and chipsets.

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Intel secured an exclusive commitment from Sony in the desktop segment in 2002. In September 2002, Intel asked Sony to become 100% Intel for its VAIO desktop line in the United States. Sony agreed to "100% MSS [market share] in Japan for Q1-Q3'03" as a condition for the pricing Intel offered. Intel retained the option to pull Sony's rebate if "they [did] not live up to their side of the bargain."

Intel secured an exclusive commitment from Sony across all market segments in 2003. Intel and Sony signed a Letter of Intent for "100% on dt and nbs," otherwise known as "full alignment" in July 2003. In the fall/winter of 2003, Intel paid Sony \$39.8 million in rebates in exchange for "Sony's worldwide top-to-bottom alignment with Intel." Sony acknowledged the



existence of its obligation to use 100% Intel for one year, but noted that it could not be explicitly stated in the Letter of Intent for legal reasons. The Letter of Intent automatically renews annually unless cancelled by either party, which has not happened. REDACTED

Through 2006 and 2007, under the meet comp program, Sony received hundreds of millions of dollars from Intel and remained 100% Intel exclusive.

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**Gateway.** Gateway is owned by Acer today. Gateway has historically focused on desktops and notebooks. Intel made payments to Gateway conditional on exclusionary

requirements. For example, Gateway cancelled launches of AMD based personal computers in 1999 and 2001 in return for money from Intel.

In 2001, Intel reached an agreement with Gateway whereby Gateway agreed to purchase CPUs exclusively from Intel in return for increased payments and other financial and non-financial support from Intel. Gateway purchased CPUs exclusively from Intel through 2003.

**Compaq.** Compaq was a Tier One OEM that sold notebooks, desktops, and servers. Hewlett Packard acquired Compaq in 2002. Prior to its acquisition, Compaq's commercial desktop and notebook businesses were exclusive to Intel.

**Samsung.** Samsung is the largest seller of desktops and notebooks in Korea. It also sells product in the United States. Intel conditioned significant payments and other benefits in return for Samsung's commitment to purchase CPUs exclusively from Intel between fall 2002 and spring 2005.

In Summer 2002, Intel proposed a "Long Term Support Plan" to Samsung. Intel offered \$3.4 million payments over the second half of 2002 and other financial support in return for Samsung's commitment to "[d]rop all AMD products from Samsung's Line-up in Q3." Samsung accepted Intel's offer and ceased its purchases of AMD CPUs. Samsung remained exclusive to Intel through the third quarter of 2005.

#### **Interrogatory No. 9**

**If you contend that Intel priced its product(s) below cost, identify every act, practice, document, and/or communication that you contend supports that claim, and identify the standard, calculation, and/or measure that you employed to determine that Intel priced its product(s) below cost.**

#### **Response to Interrogatory No. 9**

Complaint Counsel objects to this interrogatory to the extent that it implies that the Complaint does not include allegations of below cost pricing. The Complaint, including ¶¶ 18,

24, 53, and 88, sets forth Complaint Counsel's contention that Respondent priced its products below cost. Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages. Complaint Counsel also reserves the right to supplement this response because some or all of the relevant responses may be the subject of expert discovery. At this point, it is inappropriate to identify the measure of cost beyond that already identified in the Complaint given that Intel has yet to produce any of the requested cost data. The economic analysis of Intel's cost data will be the subject of expert testimony. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Complaint Counsel contends that Intel has at times priced its products below cost in an effort to foreclose or limit the adoption of non-Intel CPUs. Intel has argued that its conduct is properly analyzed as predatory pricing. Complaint Counsel disagrees. The Complaint challenges a course of anticompetitive conduct of which Intel's pricing practices are but a small piece. For example, Intel secured commitments from almost every major OEM to limit their purchases of non-Intel CPUs and chipsets. Intel used incentives and threats to: (1) maintain its CPU monopoly against the threats that began to emerge in 1999 from AMD, Transmeta, Via and others; and (2) acquire a second monopoly in the adjacent chipset and/or graphics chipset market. One set of examples are the exclusive arrangements Intel had with Dell, IBM, Lenovo, Gateway, Samsung, Sony and Toshiba that ensured those OEMs were exclusive to Intel across

their entire product portfolios. A second set of examples are the exclusive arrangements Intel had with Acer, Hewlett-Packard, Lenovo, NEC, Toshiba, and other OEMs for specific markets or geographic segments. A third set of examples are the market share arrangements Intel reached with Acer, Fujitsu, Hewlett-Packard, NEC, and other OEMs to limit the use of competitive CPUs. A fourth set of examples are Intel's arrangements with OEMs to cancel or delay platforms using non-Intel CPUs. A fifth set of examples are Intel's arrangements with OEMs that bundled the purchase of CPUs with chipset purchases.

Complaint Counsel contends that Intel priced below an appropriate measure of cost in some instances. The appropriate measure of cost in this case is average variable cost plus an appropriate level of contribution towards sunk costs. Average variable cost alone is not an appropriate measure of cost in industries characterized by significant sunk costs. The markets at issue in this case, CPUs, GPUs, and chipsets, are all characterized by substantial fixed costs. It costs billions of dollars to develop a product and build and equip a factory. That first CPU off the line costs billions but each incremental unit costs much less. Complaint Counsel contends that Intel has priced below its average avoidable cost – that is average variable cost plus a portion of sunk or fixed costs that would have been avoided.

Intel argues that the appropriate measure of cost is simply average variable cost. Yet even if that was the standard adopted by the Court, there is evidence that Intel has priced below average variable cost in some instances. Intel's below cost pricing is one of many tools it has used to exclude its competitors and maintain its monopoly in the relevant CPU markets. Moreover, in instances in which the customer has obtained Intel products for free or has placed an order that triggers rebates or discounts exceeding the total price of the additional units, the price for the Intel products is zero or negative. Zero or negatively priced Intel products are

below cost under any conceivable standard or measure of cost. The following are examples of instances in which Intel priced its CPUs below cost:

Intel's bid bucket program at Dell resulted in CPU prices below Intel's cost. Intel created a "bid bucket" system that allowed Dell to undercut the bid prices of other OEMs responding to commercial RFPs/RFQs (requests for proposals/requests for quotes) with AMD products. First, Intel funded a \$10 million "bid bucket" to respond to Hewlett-Packard's decision to launch an AMD commercial desktop in August 2002. Second, Intel funded a much larger "bid bucket" for Dell after AMD launched its Opteron server CPU in April 2003. Third, Intel funded a HPC (High Performance Computing) "bid bucket" for Dell to prevent attrition in this segment of the market. Intel and Dell agreed to the original and all subsequent criteria Dell used to determine when and how bid bucket funds were applied. Intel put in place a monitoring system to keep track of the precise use of the bid bucket funds and Dell provided detailed quarterly reports to Intel relating to the use of the Intel funds. Intel's predatory use of the bid bucket program began in late 2004, when it removed prior restrictions on the magnitude of its per-processor discounts. Intel authorized the use of the bid bucket program in all regions to set processor prices as low as needed to win the sale, irrespective of Intel's cost. Intel's Kristin McCollam wrote that "effectively, the processor could be at \$0 . . . could even be negative." REDACTED

REDACTED

For example, Dell's competitors found Dell priced substantially below their own costs, leading to the conclusion that Intel was subsidizing sales. Abhi Talwalker reported: "talked to susan [Susan Whitney of IBM]. expressed lots of frustration on deal

dynamics. she is running into many deals where dell is discounting anywhere from 50-100% BELOW her cost . . . she believes that dell is using their client meet comp to do this in servers against ibm.” Professor Murphy, Intel’s economic expert in the Delaware litigation between AMD and Intel, implicitly confirms that Intel priced below cost on CPUs with respect to some portion of Dell bids. Rather than analyzing the bids individually, Professor Murphy chose to evaluate whether Intel sales were below cost on an annual basis. Professor Murphy did not attempt to rebut the record with data on individual bids.

Intel offered retroactive rebates and payments that resulted in below cost prices. Complaint Counsel contends that Intel’s offers or sales of CPUs on terms in which the amount to be paid by the customer (on a total, not per-unit basis) stays the same or declines as the quantity purchased increases, entails below-cost pricing. That is, when the purchase of an increment of additional units would cause Intel to make a rebate payment to the purchaser that exceeds the unit price of a single item purchased, one or more such incremental units would be negatively priced or free.

The cost of acquiring the material that goes into each part, even prior to fabrication and assembly, is greater than zero because CPUs, GPUs, and chipsets are all tangible, physical things. Thus, any sale of a microprocessor, GPU, or a chipset offered or sold at a price of zero or less, is below cost by any standard, calculation or measure of cost. Any incremental units offered or sold by Intel at a zero or negative price would clearly be an Intel products priced below cost. That is, sales or offers of incremental quantities of microprocessors, GPUs, or a chipsets available at prices of zero or less are priced below average variable cost (and also, necessarily, below average variable cost plus an appropriate level of contribution towards sunk costs).

Intel priced CPUs below its average variable costs. For example, REDACTED

That would make the net price approximately 16 percent of the gross price. Intel has reported that its costs to produce CPUs during this period were well in excess of 16 percent. Intel's prices to Apple may have also been below cost. Intel acknowledged that it priced "premium products" at Apple "significantly below cost."

There are also examples in which an OEM and Intel had an existing deal and Intel offered a large discount or rebate in exchange for the OEM increasing its market share of purchases of Intel products. In some of these situations, when the new rebate or discount is allocated over the incremental units purchased, the effective price for those incremental units is negative, and certainly below cost. For example, in Q4 2004, as part of its Win Back program at Lenovo, Intel provided Lenovo with conditional rebates in exchange for Lenovo's agreement to increase its purchases of Intel processors from 70% to 80% of its commercial desktop needs. The conditional rebates totaled \$28 million, and the difference between 70% and 80% of Lenovo's purchases of processors was about 100,000 units. This means that Intel paid Lenovo a rebate or discount of \$280 per unit for each of the additional 100,000 processors that Lenovo purchased. This per-unit discount exceeded the average unit price that Lenovo had previously paid when Intel processors amounted to only 70% of Lenovo purchases. According to a September 29, 2004, e-mail and attached spreadsheet to Stuart Pann, the average price that Lenovo paid to Intel under the immediately preceding deal was \$117 per CPU.. This suggests not only a price below cost, but a negative effective price under this phase of the Q4 2004 Win Back program.

A final example of Intel's below cost pricing is its pricing of Atom. It was publicly reported that Intel charges \$45 for the Atom CPU by itself and \$25 if purchase the Atom bundled with an Intel chipset. In answer to a question as to whether Intel is charging more for the Atom CPU versus Atom plus the chipset, Mr. Otellini reportedly did not deny that this was this case, stating "[w]e have historically offered better pricing to people who buy more product."

Complaint Counsel reserves its right to advance additional claims and evidence concerning Intel's below-cost pricing.

**Interrogatory No. 10**

**Identify every act, practice, instance, document, and/or communication that you contend supports your claim that "Intel also prevented ISVs from promoting or otherwise engaging in co-development or joint marketing with AMD and other CPU manufacturers, by causing those ISV s to fear that Intel would withdraw its support for their products" and that "Intel created a false impression that the ISV software was incompatible with non-Intel CPUs because Intel required that only its name (versus including other CPU manufacturers as well) be listed on the product." Compl. ¶ 74.**

**Response to Interrogatory No. 10**

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages. Complaint Counsel also reserves the right to supplement this response because some or all of the relevant responses may be the subject of expert discovery. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:



Intel has exclusive arrangements with third-party software vendors to cause them to offer products that offer degraded performance or limited feature sets when run on computers with non-Intel CPUs. For example, Intel promised marketing assistance and other benefits to Skype in return for Skype's agreement to disable features of its software when operated on computers with non-Intel CPUs. Skype 2.0 allows a voice conference call for up to ten-way conference calls on selected Intel dual core CPUs, while users of non-Intel based computers with similar processing capability were limited to only five-way conference calls.

REDACTED delay their products or to change the specifications in order for Intel to comply with the requirements. For example, AMD was able to satisfy Microsoft's original requirements for the Microsoft Vista ready logo. Intel was not able to satisfy the graphics driver requirement and therefore sought to convince Microsoft to change the required specifications.

#### Interrogatory No. 11

**Identify every act, omission, practice, instance, document, and/or communication by Intel that you contend has "disparaged non-Intel programming tools and interfaces and made misleading promises to the industry about the readiness of Intel's GP GPU hardware and programming tools," Compl. ¶ 87, and for each act, practice, document, and/or communication state the date, the place or medium, the allegedly disparaging or misleading statement, an explanation of how the statement is disparaging or misleading, the relevant tool or interface or hardware, the speaker, and the person(s) or entities to which it was directed.**

#### Response to Interrogatory No. 11

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to

supplement this response because fact discovery in this matter is in the early stages. Complaint Counsel also reserves the right to supplement this response because some or all of the relevant responses may be the subject of expert discovery. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

In 2005, Intel was increasingly concerned that the evolution of computing and the development of GPUs posed a threat to Intel's CPU monopoly. Intel recognized that it was far behind third party GPU manufacturers (such as Nvidia and ATI) in terms of graphics performance and reputation. Intel also believed that certain high-performance nongraphical, computing applications were beginning to shift from the CPU to the GPU. Intel feared losing control of the platform as GPUs increasingly became more adept at taking on computational tasks previously performed by the CPU. Intel launched a project codenamed Larrabee which it marketed as an attempt to gain leadership in both graphics and GP GPU computing, and in both hardware and in software and programming tools. As a 2006 Intel strategic plan stated, losing additional ground on graphics represented a short-term threat as OEMs shifted to superior graphics on AMD platforms with the longer-term threat emerging as "ISVs [Independent Software Vendors] target GPGPU as Center of Platform."

Although this shift to GP GPU computing was at the very early stages, Intel believed it needed to rapidly convince the industry, particularly ISVs, that Larrabee x86-based hardware and software represented the future in graphics and computing. In other words, Intel aimed to "Keep ISV's on Intel by changing the rules of the game vs GPGPU via LRB [Larrabee]." Intel sought to keep the industry on "IA" (Intel Architecture) and Intel's "ISA" (Instruction Set Architecture).

Intel believed that once ISVs shifted away from Intel started occurring for GP GPU computing, “it will be VERY difficult to bring them back.”

To prevent this shift from gaining traction, Intel engaged in a multi-pronged strategy. It accelerated development of graphics hardware and programming tools. As early as 2006, Intel also began outreach efforts to industry participants and academic centers to publicize Larrabee and tout the advantages of the hardware and its associated software and programming interfaces over existing graphics hardware and programming tools.

Intel aimed to persuade the industry that alternative programming interfaces, such as Nvidia and ATI’s proprietary interfaces, were inferior to Intel’s proposed solutions. Intel wanted to “keep developers focused on IA platform” by “position[ing] others as subsets with awkward programming models.” Intel’s “proposed external messaging” was to characterize existing competitor GP GPU programming tools as “not general purpose” because of “awkward” programming, vendor lock-in, steep requirements for architectural knowledge, and not enough “abstraction” for programmers. Intel portrayed CUDA-based interfaces, Nvidia’s GP GPU architecture, as “too low level” and “not general purpose at all.”

Outside the company, Intel set forth an aggressive schedule for Larrabee’s development and ultimate production. For example, in a November 2006 presentation to Microsoft, Intel disclosed a Larrabee roadmap with initial Larrabee silicon issued in the first half of 2008 and high-end discrete GPUs to market by the first half of 2009.

As Intel continued development on Larrabee from 2007 to 2009, Intel ran into a number of hurdles both with Larrabee software and hardware. Nevertheless, Intel continued to tell the world that Larrabee would be a high-end, competitive GPU and that its x86-based architecture would allow for much easier GPU programming than interfaces offered by ATI and Nvidia.

Intel continued to publicize, including at various IDF's in at least 2008 and 2009, that Larrabee products would be available by the end of 2009 or early 2010. In early December 2009, Intel announced that the initial retail release of Larrabee had been cancelled and that there was no projected time frame for when Larrabee hardware would be released.

**Interrogatory No. 12**

**Identify every act, omission, practice, instance, document, and/or communication that you contend supports your claim that “the benchmarks Intel publicized were not accurate or realistic measures of typical computer usage or performance, because they did not simulate 'real world' conditions, and/or overestimated the performance of Intel's product vis-a-vis non-Intel products,” including but not limited to each benchmark identified in the definition of “RELEVANT BENCHMARKS” in Complaint Counsel's First Set of Requests for Production of Documents to Respondent Intel Corporation. Compl. ¶ 66.**

Response to Interrogatory No. 12

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages. Complaint Counsel also reserves the right to supplement this response because some or all of the relevant responses may be the subject of expert discovery. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Complaint Counsel contends that Intel has used benchmarks in much of its marketing materials including, but not limited to white papers, publication on its website, materials

presented to OEMs, and channel marketing materials. These benchmarks were not accurate or realistic measures for at least two reasons.

Some benchmarks, such as BAPCo benchmarks, were not accurate or realistic measures of computer usage or performance, because they used workloads which favor Intel microprocessors. For example, with respect to the BAPCo MobileMark 2007 benchmark, Intel calculated workloads which would maximize the performance difference between AMD and Intel processors. Intel included these workloads in the MobileMark 2007 benchmark with the result that the MobileMark 2007 productivity score heavily and unreasonably favored Intel's microprocessors. In addition to being inaccurate measures of performance, BAPCo and Intel go to great lengths to emphasize that BAPCo's workloads are derived from realistic, real world applications, via BAPCo's website and general marketing. Intel has publicized the performance of its microprocessors on the MobileMark 2007 productivity score.

Some benchmarks, such as BAPCo benchmarks, are not accurate or realistic measures of computer usage or performance, because they include applications which are developed and compiled with Intel's compilers and other software development tools, which disable functionality on non-Intel microprocessors. Slower performance reflected in the benchmarks was a direct result of Intel's discriminatory design. For example, the discriminatory design heavily impacted the BAPCo benchmarks because Intel succeeded in skewing the productivity scores toward Adobe products for which running SSE2 is significant.

Intel caused companies which distribute benchmarks to use Intel's compilers and libraries in such a way that that the benchmarks would use optimizations available on all microprocessors, only on Intel processors. For example, some compiled benchmarks use Intel libraries which do not use streaming SIMD extension instructions when run on non-Intel processors. In addition,

benchmarking programs were sometimes compiled using Intel's compiler switches, such that non-Intel microprocessors used a generic code path which did not use streaming SIMD instructions. The effect of such compilations impacted the performance of non-Intel microprocessors.

When using benchmarks that are distributed as source code, Intel has also failed to disclose that by using Intel compilers and libraries to compile the benchmarks, the benchmarks disable functionality on non-Intel microprocessors. For example, Intel publicizes benchmarks, that it compiles using Intel libraries which do not use streaming SIMD extension instructions when run on non-Intel processors. In addition, Intel markets benchmarking scores using benchmarks compiled using Intel compiler switches such that non-Intel microprocessors used a generic code path which did not use streaming SIMD instructions.

**Interrogatory No. 13**

**Identify every "Intel-compiled software application[,]" including by version if available, on which "the slower performance of non-Intel CPUs" is a basis for your claims in Paragraphs 56-61, including but not limited to every act, practice, document, and/or communication that you contend supports your claim that performance differences between Intel CPUs and competing CPUs on software applications "were due largely or entirely to the Intel software." Compl. ¶ 59.**

**Response to Interrogatory No. 13**

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages. Complaint Counsel also reserves the right to supplement this response because some or all of the relevant

responses may be the subject of expert discovery. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

The Intel-compiled software applications, on which performance was slowed by Intel's software design referred to in Paragraphs 56-61 of the Complaint include, but are not limited to, Adobe products, benchmarking products such as BAPCo Sysmark and Mobilemark, and LSTC products. The performance differences between Intel and non-Intel CPUs when running these software applications were largely due to the compiler's disabling of functions on non-Intel microprocessors. Because the Intel compiler did not run the available streaming SIMD extension instructions on non-Intel processors, non-Intel processor performance was significantly impacted.

**Interrogatory No. 14**

**Identify every act, omission, practice, instance, document, and/or communication that you contend supports your claim that Intel "disseminated false or misleading documentation about its compiler and libraries," including but not limited to every act, practice, document, and/or communication that you contend supports your claim that "Intel misrepresented, expressly or by implication, the source of the problem and whether it could be solved." Compl. ¶ 59-60.**

**Response to Interrogatory No. 14**

Complaint Counsel specifically objects to this interrogatory on the grounds that it is unduly burdensome and seeks to compel Complaint Counsel to undertake investigation, discovery, and analysis on behalf of Respondent. Complaint Counsel specifically objects to this interrogatory to the extent that it is a contention interrogatory to which no response is required at this time and as such it is unduly burdensome. Complaint Counsel reserves the right to supplement this response because fact discovery in this matter is in the early stages. Complaint Counsel also reserves the right to supplement this response because some or all of the relevant

responses may be the subject of expert discovery. Subject to, and without waiving the general objections set forth above and objections incorporated herein, Complaint Counsel responds as follows:

Intel disseminated false or misleading documentation about its compilers and libraries through its failure to mention the use of “GenuineIntel” CPUID checks and provision of misleading reasons why certain compilation flags did not work on non-Intel computers in documents such as, but not limited to, Intel’s User Guide for version 8 of the Intel Compiler, Intel’s technical support website and Intel’s white papers. Intel further responded to ISV concerns about the apparent variation in performance of identical software run on Intel and non-Intel CPUs by misrepresenting the source of the problem and whether it could be resolved. ISVs raised their concerns through Intel’s helpdesk and directly to Intel’s software development group. Intel also claimed that its compilers and libraries would run streaming SIMD extension instructions on non-Intel microprocessors. Intel also claimed that its compiler would perform as well or better than other available compilers on AMD processors which was false or misleading to the users of Intel’s compiler.

### **General Objections**

The following General Objections apply to all of Respondent’s Interrogatories and are incorporated by reference into each response. The assertion of the same, similar, or additional objections or the provision of partial answers in response to an individual interrogatory does not waive any of Complaint Counsel’s general objections as to the other interrogatories.

1. Complaint Counsel objects to Respondent’s Interrogatories on the ground that they are contention interrogatories which are premature and inappropriate. *See* Rule 3.35(b)(2).



Indeed, several of Respondent's interrogatories ignore the deadlines established in the Scheduling Order issued by the Administrative Law Judge on January 14, 2010. The Federal Trade Commission amended Rule 3.35 in January 2009, to allow a party to delay answering a contention interrogatory until the close of discovery, the pretrial conference, or "other later time." The purpose of the rule change was to "conform Commission practice with federal court practice and consistently allow a party to delay answering a contention interrogatory until fact discovery is almost complete." Notice: Federal Trade Commission Interim final rules with request for comment, 74 Federal Register 1804, 1815 (Jan. 2009). Complaint Counsel objects to the tactic of propounding contention interrogatories at this initial stage of discovery as abusive and a waste of resources. On this basis, Complaint Counsel generally objects to Intel's interrogatories and reserves the right to later amend or supplement our responses.

2. Complaint Counsel objects to Respondent's interrogatories to the extent they seek information that relates to issues that may be the subject of expert testimony in this case. Under the Scheduling Order in this case, expert discovery is not scheduled to begin for several months.
3. Complaint Counsel objects to Respondent's interrogatories to the extent they are overly broad, vague, ambiguous, unduly burdensome, oppressive, and are not reasonably calculated to lead to the discovery of admissible evidence.
4. Complaint Counsel objects to Respondent's interrogatories to the extent that it seeks information in Intel's custody and control such as Intel's documents, information from its current and former executives, the testimony of Intel's representatives in depositions and investigational hearings, and discovery from third parties in the course of Intel's litigation

with AMD and Nvidia. Indeed, Intel has admitted to facts requested by some of these interrogatories in their Answer and in their response to Complaint Counsel's First Requests for Admission.

5. Complaint Counsel objects to Respondent's interrogatories to the extent that they seek documents protected by deliberative process privilege, law enforcement investigative privilege, informant's privilege, or attorney work product doctrine.
6. Complaint Counsel generally objects to Definition E in Respondent's interrogatories which defines "FTC" to mean "the Federal Trade Commission, and any of its directors, commissioners, complaint counsel, employees, consultants and agents." The FTC Rules of Practice provide that discovery is not permitted for information in the possession of the Commission, the General Counsel, the Office of Administrative Law Judges, the Secretary (in his capacity as a custodian or recorder of any such information) or their respective staffs and such material is explicitly excluded from interrogatory responses by Rule 3.35(a)(1). Moreover, Rule 3.31(c)(2) states that "complaint counsel need only search for materials . . . that are in the possession, custody, or control of the Bureaus or Offices of the Commission that investigated the matter, including the Bureau of Economics."
7. Complaint Counsel objects to Definition J in Respondent's interrogatories, on the ground that all of the information was supplied by persons not under the control of the Federal Trade Commission and/or is subject to the work product privilege, investigatory privilege and informer's privilege. All non-privileged information responsive to these interrogatories was gathered from Intel and/or non-parties during the Part II investigation and the Part III discovery process.

8. Complaint Counsel reserves all of its evidentiary objections or other objections to the introduction or use of any response at the hearing in this action and does not, by any response to any interrogatory, waive any objections to that interrogatory, stated or unstated.

9. Complaint Counsel's discovery and investigation in this matter are continuing.

Complaint Counsel reserves the right to assert additional objections to Respondent's First Set of Interrogatories, and to amend or supplement these objections and its responses as necessary.

**Exhibit B**  
**Public Version**



documents in the event a stipulation cannot be reached concerning the authentication of non-party documents;

- C. to supplement this list in light of the fact that discovery in this matter is ongoing;
- D. to question the persons listed below about any topics not identified that are the subject of testimony of witnesses called by Respondent;
- E. not to call at the hearing any of the persons listed below, as circumstances may warrant;
- F. to question the persons listed below about any other topics as to which a person testified at his or her deposition or investigational hearing; or
- G. to call any of these or other witnesses for rebuttal testimony.

Subject to these reservations of rights, Complaint Counsel's preliminary list of witnesses is as follows:

**COMPLAINT COUNSEL'S CURRENT GOOD FAITH DESIGNATION  
OF ONE HUNDRED WITNESSES**

**Respondent Witnesses**

1. **Robert Adano.** Mr. Adano has worked on the Acer account for much of the 2000s. We expect that Mr. Adano will testify about Intel's relationship with Acer. We further expect that Mr. Adano will testify about matters discussed or raised in his deposition.
2. **John Antone.** Mr. Antone was the Vice President and General Manager of Sales and Marketing for the Asia-Pacific region before he left Intel in August 2008. He also served as President of Intel Japan and Senior Product Marketing Executive from 2000-2003. We expect that Mr. Antone will testify about Intel's various relationships with the Japanese, Korean, Chinese, and Taiwanese OEMs and ODMs. We further expect that Mr. Antone will testify about matters discussed or raised in his deposition.
3. **Robert Baker.** Mr. Baker is Senior Vice President and General Manager of Intel's Technology and Manufacturing Group. We expect that Mr. Baker will

testify about: Intel's relationship with Tier One OEMs; Intel's canceled projects, supply issues and delayed products; and matters discussed or raised in his deposition.

4. **Craig Barrett.** Mr. Barrett is the former Chairman of the Board and former CEO of Intel. We expect that Mr. Barrett will testify about the history of, and competitive conditions in the CPU, GPU, and chipset industry. We further expect Mr. Barrett to testify about Intel's CPUs, GPUs and chipsets products, strategies, and roadmaps. We further expect that Mr. Barrett will testify about Intel's relationship with various OEMs and ODMs, including negotiations with Tier One OEMs for the purchase and sale of CPUs. We also expect Mr. Barrett to testify about competition in the CPU, GPU and/or chipset markets. We further expect Mr. Barrett to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Barrett to testify about Intel's relationship with third party hardware vendors, including Nvidia and ATI. We further expect Mr. Barrett to testify about Intel's compilers and libraries and Intel's dealings with ISVs, OSVs and other software developers. We further expect that Mr. Barrett will testify about matters discussed or raised in his deposition.
5. **Andy Bryant.** Mr. Bryant is the Chief Administrative Officer of Intel. During the relevant time period he was the CFO of Intel. We expect Mr. Bryant to testify about Intel's accounting practices and book keeping. We further expect Mr. Bryant to testify about Intel's canceled projects, supply issues and delayed products. We further expect Mr. Bryant to testify about Intel's accounting treatment of payments, discounts, development funds and rebates to its customers. We further expect Mr. Bryant to testify about Intel's CPU roadmap and graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Bryant to testify about Intel's dealings with third party graphics suppliers. We further expect Mr. Bryant to testify about Intel's graphics strategy, including the importance of graphics to OEMs, ODMs and other third parties, and the use of graphics hardware and software in general purpose computing. We further expect Mr. Bryant to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect that Mr. Bryant will testify about matters discussed or raised in his deposition.
6. **Louis Burns.** Mr. Burns is the Vice President and General Manager of the Digital Health Group at Intel. We expect Mr. Burns to testify about Intel's CPU roadmaps and graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Burns to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Burns to testify about Intel's graphics strategy, including the importance of graphics to OEMs, ODMs and other third parties, and the use of graphics hardware and software in general purpose computing. We further expect Mr. Burns to testify about Intel's

dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect Mr. Burns to testify about Intel's dealings with Via. We further expect that Mr. Burns will testify about matters discussed or raised in his deposition.

7. **Douglas Carmean.** Mr. Carmean is an Intel Fellow and Larrabee chief architect in the Visual Computing Group for the Intel Architecture Group at Intel Corporation. We expect Mr. Carmean to testify about Intel's CPU roadmap and graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Carmean to testify about Intel's dealings with Nvidia and ATI. We further expect Mr. Carmean to testify about Intel's graphics strategy, including the importance of graphics to OEMs, ODMs and other third parties, and the use of graphics hardware and software in general purpose computing. We further expect Mr. Carmean to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect that Mr. Carmean will testify about matters discussed or raised in his deposition.
8. **Anand Chandrasekher.** Mr. Chandrasekher is the General Manager of Ultra Mobility Group and the former head of Intel's Worldwide Sales and Marketing Group. We expect Mr. Chandrasekher to testify about Intel's CPUs, GPUs and/or chipsets products, strategies, and roadmaps. We further expect that Mr. Chandrasekher will testify about Intel's relationship with various OEMs and ODMs, including negotiations with Tier One OEMs for the purchase and sale of CPUs. We also expect Mr. Chandrasekher to testify about competition in the CPU, GPU and/or chipset markets. We further expect Mr. Chandrasekher to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Chandrasekher to testify about Intel's relationship with third party hardware vendors, including Nvidia and ATI. We further expect Mr. Chandrasekher to testify about Intel's compilers and libraries and Intel's dealings with ISVs, OSVs and other software developers. We further expect that Mr. Chandrasekher will testify about matters discussed or raised in his deposition.
9. **Deborah Conrad.** Ms. Conrad is the Vice President and General Manager of the Corporate Marketing Group and Director of Team Apple at Intel. We expect Ms. Conrad to testify about Intel's relationship with Apple. We further expect Ms. Conrad to testify about Apple's exclusive agreement with Intel and Apple's purchase and use of Intel CPUs. We further expect Ms. Conrad to testify about Apple's interactions with Intel regarding integrated and discreet graphics, including Larrabee. We further expect Ms. Conrad to testify about Apple's decisions to use or to not use Intel's graphics, including the importance of graphics capabilities and GPGPU computing to Apple's business. We further expect Ms. Conrad to testify about Apple's use of third party chipsets and discreet



graphics. We further expect Ms. Conrad to testify about matters discussed or raised in her deposition.

10. **Martyn Corden.** Mr. Corden is a technical consulting engineer for Intel. We expect that Mr. Corden will testify about optimization provided by Intel compilers, tools and libraries and the effect that the use of such compilers, tools and libraries may have on the performance of non-Intel CPUs. We further expect Mr. Corden to testify about matters discussed or raised in his deposition.
11. **Steven Dallman.** Mr. Dallman is Vice President, Sales and Marketing Group and general manager of the worldwide Reseller Channel Organization for Intel. We expect that Mr. Dallman will testify about Intel's sales of CPUs to the Channel and competition relating to the Channel. We further expect that Mr. Dallman will testify about matters discussed or raised during his deposition.
12. **Nicholas Davison.** Mr. Davison was the Director of North American Channel Sales and Marketing when he left Intel in 2008, and previously served as co-regional manager for HP and Compaq. We expect Mr. Davison to testify about customer demand for CPUs from Intel and AMD. We also expect him to testify about Intel's relationship with its customers, in particular Compaq and HP. Mr. Davison will also testify about matters raised or discussed in his deposition.
13. **Shmuel (Mooly) Eden.** Mr. Eden is the Vice President and General Manager of the Mobile Platforms Group at Intel. We expect Mr. Eden to testify about Intel's CPU roadmap and graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Eden to testify about Intel's dealings with third party graphic vendors. We further expect Mr. Eden to testify about Intel's graphics strategy. We further expect Mr. Eden to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We expect that Mr. Eden will testify about Intel's relationship with Lenovo. We further expect that Mr. Eden will testify about matters discussed or raised in his deposition.
14. **Benjamin Foss.** Benjamin Foss is Director of Access Technology, Intel Digital Health Group. Previously, Mr. Foss served as Business Development Manager in the Mobile Platform Group, where he successfully negotiated with Skype to implement a 10-way conference calling feature on Skype 2.0 which was made exclusive to PCs with Intel CPUs. We expect Mr. Foss to testify about the 10-way conference calling feature on Skype 2.0, and Intel's negotiations with Skype. We further expect that Mr. Foss will testify about matters discussed or raised in his deposition.
15. **Michael Frieswyk.** Mr. Frieswyk was a Vice President for Sales and head of the HP group while at Intel. We expect Mr. Frieswyk to testify about customer demand for CPUs from Intel and AMD. We also expect Mr. Frieswyk to testify about Intel's relationship with its customers, in particular, HP. We also expect him to testify about matters raised or discussed in his deposition.

16. **Patrick Gelsinger.** Mr. Gelsinger was the Senior Vice President and General Manager, Digital Enterprise Group at Intel. We expect Mr. Gelsinger to testify about Intel's CPUs, GPUs and/or chipsets products, strategies, and roadmaps. We further expect that Mr. Gelsinger will testify about Intel's relationship with various OEMs and ODMs, including negotiations with Tier One OEMs for the purchase and sale of CPUs. We also expect Mr. Gelsinger to testify about competition in the CPU, GPU and/or chipset markets. We further expect Mr. Gelsinger to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Gelsinger to testify about Intel's relationship with third party hardware vendors, including Nvidia and ATI. We further expect Mr. Gelsinger to testify about Intel's compilers and libraries and Intel's dealings with ISVs, OSVs and other software developers. We further expect that Mr. Gelsinger will testify about matters discussed or raised in his deposition.
  
17. **Neil Green.** Mr. Green has been the Global Account Manager for IBM/Lenovo since 2005 and has been on the IBM/Lenovo account since 2003. We expect that Mr. Green will testify about Intel's relationship with Lenovo and IBM. We further expect that Mr. Green will testify about matters discussed or raised in his deposition.
  
18. **Jeffrey Hoogenboom.** Mr. Hoogenboom was a Vice President of Sales and Marketing Group General Manager of the IBM account at Intel. We expect that Mr. Hoogenboom will testify about Intel's relationship with Lenovo and IBM. We further expect that Mr. Hoogenboom will testify about matters discussed or raised in his deposition.
  
19. **Renee James.** Ms. James is the Vice President and General Manager of Software and Services at Intel. We expect Ms. James to testify about Intel's dealings with ISVs. We further expect Ms. James to testify about Intel's dealings with Microsoft, including issues with compilers, benchmarks and Microsoft Vista. We further expect that Ms. James will testify about matters discussed or raised in her deposition.
  
20. **James A. Johnson.** Mr. Johnson is vice president of the Intel Architecture Group and general manager of the Visual Computing Group. We expect Mr. Johnson to testify about Intel's CPU roadmaps and graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Johnson to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Johnson to testify about Intel's graphics strategy. We further expect Mr. Johnson to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect that Mr. Johnson will testify about matters discussed or raised in his deposition.

21. **Shervin Kheradpir.** Mr. Kheradpir was responsible for Performance Evangelism at Intel. As such he was responsible for competitive analysis related to the relative benchmarked performance between Intel and non-Intel CPUs. We expect Mr. Kheradpir to testify about Intel's benchmarking process, and efforts to use benchmarking for competitive advantage. We further expect Mr. Kheradpir to testify about matters discussed or raised in his deposition.
22. **Thomas Kilroy.** Mr. Kilroy is Senior Vice President and General Manager of Intel's Sales and Marketing Group (SMG). In 2002 he became SMG Vice President and General Manager of the Communications Sales Organization and a year later he was named Vice President of the SMG and Co-President of Intel Americas, Inc. We expect that Mr. Kilroy will testify about Intel's relationship with OEMs and ODMs, including any agreements Intel entered into with OEMs related to the sale of CPUs, GPUs, and chipsets. We further expect that Mr. Kilroy will testify about matters discussed or raised in his deposition.
23. **Kazuhiko Kitagawa.** Mr. Kitagawa was the Regional Sales Manager for Fujitsu in Intel Japan in 2003. In 2005, Mr. Kitagawa became the Regional Manager for Sony America in Intel America. We expect that Mr. Kitagawa will testify about Intel's relationship with Fujitsu and Sony. We further expect that Mr. Kitagawa will testify about matters discussed or raised in his deposition.
24. **Tom Lacey.** Mr. Lacey was the President of Intel Americas and Vice President of Intel Sales and Marketing. We expect that Mr. Lacey will testify about Intel's relationship with OEMs and ODMs, including any agreements Intel entered into with OEMs related to the sale of CPUs, GPUs, and chipsets. We further expect that Mr. Lacey will testify about matters discussed or raised in his deposition.
25. **Charlotte Lamprecht.** Ms. Lamprecht was the Director of the Americas Consumer, Channel, Sales and Marketing and was General Manager of the worldwide Sony Sales and Program Office. Ms. Lamprecht was also the account representative for Gateway. We expect that Ms. Lamprecht will testify about Intel's relationship with Gateway, Sony and Lenovo. We further expect that Ms. Lamprecht will testify about matters discussed or raised in her deposition.
26. **Richard Malinowski.** Mr. Malinowski is a Vice President of the Intel Architecture Group and General Manager of the Client Components Group. We expect Mr. Malinowski to testify about Intel's CPU roadmaps, graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Malinowski to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Malinowski to testify about Intel's graphics strategy, including the importance of graphics to OEMs, ODMs and other third parties, and the use of graphics hardware and software in general purpose computing. We further expect Mr. Malinowski to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics

hardware and software. We further expect that Mr. Malinowski will testify about matters discussed or raised in his deposition.

27. **Sean Maloney.** Mr. Maloney is Executive Vice President and Co-General Manager of Intel Corporation's Intel Architecture Group (IAG). Prior to his current role, Maloney served as Intel's chief sales and marketing officer. Mr. Maloney is the Vice President and General Manager of the Business Management Group at Intel. We expect Mr. Maloney to testify about Intel's CPUs, GPUs and/or chipsets products, strategies, and roadmaps. We further expect that Mr. Maloney will testify about Intel's relationship with various OEMs and ODMs, including negotiations with Tier One OEMs for the purchase and sale of CPUs. We also expect Mr. Maloney to testify about competition in the CPU, GPU and/or chipset markets. We further expect Mr. Maloney to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Maloney to testify about Intel's relationship with third party hardware vendors, including Nvidia and ATI. We further expect Mr. Maloney to testify about Intel's compilers and libraries and Intel's dealings with ISVs, OSVs and other software developers. We further expect that Mr. Maloney will testify about matters discussed or raised in his deposition.
28. **Kristen McCollum.** Ms. McCollum was a member of Intel's Dell account team responsible for global and sales marketing. We expect that Ms. McCollum will testify about matters relating to the Intel's relationship with Dell. We further expect that Ms. McCollum will testify about matters discussed or raised in her deposition.
29. **Eric Mentzer.** Mr. Mentzer is the Vice President and Director of Visual Computing Architecture, Visual Computing Group at Intel. We expect Mr. Mentzer to testify about Intel's CPU roadmaps and graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Mentzer to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Mentzer to testify about Intel's graphics strategy, including the importance of graphics to OEMs, ODMs and other third parties, and the use of graphics hardware and software in general purpose computing. We further expect Mr. Mentzer to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect that Mr. Mentzer will testify about matters discussed or raised in his deposition.
30. **Hiroki Ohinata.** Mr. Ohinata is the General Manager of the worldwide Sony Sales and Program Office. We expect that Mr. Ohinata will testify about Intel's relationship with Sony and Fujitsu. We further expect that Mr. Ohinata will testify about matters discussed or raised in his deposition.

31. **Jon Omer.** Mr. Omer is a business development engineer for Intel. We expect that Mr. Omer will testify about Intel's relationship with IBM. We further expect Mr. Omer to testify about joint projects between Intel and IBM including BladeCenter and the Hurricane chipset. We further expect that Mr. Omer will testify about matters discussed or raised in his deposition.
32. **Paul Otellini.** Mr. Otellini is the President and CEO of Intel. We expect Mr. Otellini to testify about the history of, and competitive conditions in the markets for CPUs, GPUs, and/or chipsets. We further expect Mr. Otellini to testify about Intel's CPUs, GPUs and/or chipsets products, strategies, and roadmaps. We further expect that Mr. Otellini will testify about Intel's relationship with various OEMs and ODMs, including negotiations with Tier One OEMs for the purchase and sale of CPUs, GPUs, and chipsets. We also expect Mr. Otellini to testify about competition in the CPU, GPU and/or chipset markets. We further expect Mr. Otellini to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Otellini to testify about Intel's relationship with third party hardware vendors, including Nvidia and ATI. We further expect Mr. Otellini to testify about Intel's compilers and libraries and Intel's dealings with ISVs, OSVs and other software developers. We further expect that Mr. Otellini will testify about matters discussed or raised in his deposition.
33. **Stuart Pann.** Mr. Pann is the Vice President and General Manager of the Business Management Group at Intel. Mr. Pann has held a number of positions in Intel's Sales and Marketing Group, including managing the group responsible for pricing and planning. We further expect Mr. Pann to testify about Intel's CPUs, GPUs and/or chipsets products, strategies, and roadmaps. We expect that Mr. Pann will testify about Intel's relationship with various OEMs and ODMs, including negotiations with Tier One OEMs for the purchase and sale of CPUs. We also expect Mr. Pann to testify about competition in the CPU, GPU and/or chipset markets. We further expect Mr. Pann to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Pann to testify about Intel's relationship with third party hardware vendors, including Nvidia and ATI. We further expect Mr. Pann to testify about Intel's compilers and libraries and Intel's dealings with ISVs, OSVs and other software developers. We further expect that Mr. Pann will testify about matters discussed or raised in his deposition.
34. **David "Dadi" Perlmutter.** Mr. Perlmutter is the Executive Vice President and General Manager of Mobility Group of Intel. We expect Mr. Perlmutter to testify about Intel's CPUs, GPUs and/or chipsets products, strategies, and roadmaps. We further expect that Mr. Perlmutter will testify about Intel's relationship with various OEMs and ODMs, including negotiations with Tier One OEMs for the purchase and sale of CPUs. We also expect Mr. Perlmutter to testify about

competition in the CPU, GPU and/or chipset markets. We further expect Mr. Perlmutter to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Perlmutter to testify about Intel's relationship with third party hardware vendors, including Nvidia and ATI. We further expect Mr. Perlmutter to testify about Intel's compilers and libraries and Intel's dealings with ISVs, OSVs and other software developers. We further expect that Mr. Perlmutter will testify about matters discussed or raised in his deposition.

35. **Justin Rattner.** Mr. Rattner is the Chief Technology Officer of Intel. We expect Mr. Rattner to testify about Intel's CPU roadmaps and graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Rattner to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Rattner to testify about Intel's graphics strategy, including the importance of graphics to OEMs, ODMs and other third parties, and the use of graphics hardware and software in general purpose computing. We further expect Mr. Rattner to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect Mr. Rattner to testify about Intel's canceled projects, supply issues and delayed products. We further expect Mr. Rattner to testify about comparisons between Intel's products and AMD's products. We further expect Mr. Rattner testify about Intel's dealings with OEMs. We further expect Mr. Rattner to testify about matters discussed or raised in his deposition.
36. **Arthur Roehm.** Mr. Roehm is the Vice President of Sales and Marketing Group and Director of Global Accounts for Dell. Mr. Roehm was the vice president of sales and marketing and director of global accounts for Dell. We expect that Mr. Roehm will testify about matters relating to Intel's relationship with Dell including pricing and rebate negotiations. We further expect that Mr. Roehm will testify about matters discussed or raised in his deposition.
37. **Kristoffer Satterwaite.** Mr. Satterwaite is the former Compaq District Manager of Intel. We expect Mr. Satterwaite to testify about Intel's relationship with Compaq, including negotiations for the purchase and sale of CPUs, GPUs and chipsets. We also expect Mr. Satterwaite to testify about competition in the CPU, GPU and/or chipset markets. We further expect Mr. Satterwaite to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect that Mr. Satterwaite will testify about matters discussed or raised in his deposition.
38. **Paul Schmisser.** Mr. Schmisser was a member of Intel's Dell account team responsible for Intel's enterprise account with Dell. We expect that Mr. Schmisser will testify about matters relating to Intel's relationship with Dell.

We further expect that Mr. Schmisser will testify about matters discussed or raised in his deposition.

39. **Kirk Skaugen.** Mr. Skaugen is the Vice President of the Intel Architecture Group and the General Manager of the Data Center Group. We expect Mr. Skaugen to testify about Intel's CPU and chipset roadmaps and competitive assessments of the same. We further expect that Mr. Skaugen will testify about Intel's relationship with OEMs, ODMs, and other third parties, including any agreements Intel entered into with OEMs related to the sale of CPUs, GPUs, and chipsets. We further expect Mr. Skaugen to testify about matters discussed or raised in his deposition.
40. **Kevin B. Smith.** Mr. Smith is a software architect for Intel's C and FORTRAN compilers. Mr. Smith has worked on optimizing compilers for Intel 8086, 80186, i960, Pentium, Pentium Pro, Pentium III, Pentium 4, and Pentium M CPUs. We expect that Mr. Smith will testify about performance and CPU or vendor-specific aspects of Intel software development products and the information provided about those topics to customers of Intel software development tools. We further expect that Mr. Smith will testify about matters discussed or raised in his deposition.
41. **Kevin J. Smith.** Mr. Smith is the Director of Intel's Compiler Products. Mr. Smith is responsible for decisions concerning the design of Intel compiler products and related Intel software libraries. We expect Mr. Smith to testify about performance and CPU or vendor-specific aspects of Intel software development products and the information provided about those topics to customers of Intel software development tools. We further expect that Mr. Smith will testify about matters discussed or raised in his deposition.
42. **Michael Splinter.** Mr. Splinter was an Executive at Intel Corporation where he held a number of positions in his 20 years at the company, including Executive Vice President and Director of Sales and Marketing and Executive Vice President and General Manager of the Technology and Manufacturing Group. We expect that Mr. Splinter will testify about Intel's relationship with various OEMs, including any agreements Intel entered into with OEMs related to the sale of CPUs, GPUs, and chipsets. We also expect Mr. Splinter to provide testimony concerning negotiations with OEMs for the purchase and sale of CPUs, GPUs, and chipsets. We further expect that Mr. Splinter will testify about matters discussed or raised in his deposition.
43. **Michael Stamps.** Mr. Stamps was a field sales engineer for the IBM and Lenovo account. We expect that Mr. Stamps will testify about Intel's relationship with Lenovo and IBM. We further expect that Mr. Stamps will testify about matters discussed or raised in his deposition.

44. **David Stitzenberg.** Mr. Stitzenberg held several pricing and planning roles during his career at Intel. We expect that Mr. Stitzenberg will testify about Intel's relationship with various OEMs and ODMs, including negotiations with Tier One OEMs for the purchase and sale of CPUs. We also expect Mr. Stitzenberg to testify about competition in both the CPU and graphics markets. We further expect that Mr. Stitzenberg will testify about matters discussed or raised in his deposition.
45. **Mark Swearingen.** Mr. Swearingen is Director of the Microsoft Program Office at Intel. We expect Mr. Swearingen to testify regarding interactions with Microsoft and other OSVs regarding operating system features and operating system support for features and technologies implemented in Intel products, as well as Intel's relationship with Microsoft.
46. **Abhi Talwalkar.** Mr. Talwalkar was the Vice President and Co-General Manager, Digital Enterprise Group at Intel. We expect Mr. Talwalkar to testify about Intel's CPU and chipset roadmap and competitive assessments of the same. We further expect that Mr. Talwalkar will testify about Intel's relationship with OEMs, ODMs, and other third parties, including any agreements Intel entered into with OEMs related to the sale of CPUs, GPUs and chipsets. We further expect Mr. Talwalkar will testify about matters discussed or raised in his deposition.
47. **Ron Thornburg.** Mr. Thornburg is part of Intel's Nvidia Program Office. We expect Mr. Thornburg to testify about Intel's graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Thornburg to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Thornburg to testify about Intel's graphics strategy, including the importance of graphics to OEMs, ODMs and other third parties, and the use of graphics hardware and software in general purpose computing. We further expect Mr. Thornburg to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect that Mr. Thornburg will testify about matters discussed or raised in his deposition.
48. **Jim Valerio.** Mr. Valerio is an Engineering Manager at Intel. We expect Mr. Valerio to testify about Intel's graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Valerio to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Valerio to testify about Intel's graphics strategy, including the importance of graphics to OEMs, ODMs and other third parties, and the use of graphics hardware and software in general purpose computing. We further expect Mr. Valerio to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect that Mr. Valerio will testify about matters discussed or raised in his deposition.



49. **Trent Wallace.** Mr. Wallace was a member of Intel's Dell account team as a field sales representative and then later as client account matter for the Dell account. We expect that Mr. Wallace will testify about matters relating to Intel's rebate program with Dell and about pricing and rebate negotiations between Intel and Dell, Inc. We further expect Mr. Wallace to testify about matters discussed or raised in his deposition.
50. **Joe Wolf III.** Mr. Wolf manages Intel's Compilers Technical Support and Consulting team. Mr. Wolf is responsible for all technical support and training for Intel compiler products. Mr. Wolf has been with the Intel compiler team since 1996 working as a compiler developer, support engineer and as a manager. We expect that Mr. Wolf will testify about customer issues and concerns arising from Intel's use of multiple code paths in Intel libraries and compilers. Mr. Wolf will also be able to testify about design decisions Intel made related to Intel decisions to support or not support SIMD capability in non-Intel CPUs. We further expect Mr. Wolf to testify about matters discussed or raised in his deposition.
51. **John Wong (Kaiko Ko).** Mr. Wong has worked on the Toshiba account since 1998. We expect that Mr. Wong will testify about Intel's relationship with Toshiba. We further expect that Mr. Wong will testify about matters discussed or raised in his deposition.
52. **David Yoffie.** Professor Yoffie is a member of Intel's Board of Directors and a professor at Harvard Business School. We expect Professor Yoffie will testify about the history of, and competitive conditions in the CPU, GPU, and chipset industry. We further expect Professor Yoffie to testify about Intel's competitive strategy in the relevant CPU, GPU and chipset market. We also expect Professor Yoffie to testify about competition in the CPU, GPU and/or chipset markets. We further expect that Mr. Barrett will testify about matters discussed or raised in his deposition.
53. **Kazumasa Yoshida.** Mr. Yoshida was President of Intel Japan beginning in the mid 2000s. We expect that Mr. Yoshida will testify about Intel's relationship with the Japanese OEMs, including but not limited to Fujitsu, NEC, Sony and Toshiba. We further expect that Mr. Yoshida will testify about matters discussed or raised in his deposition.

### **Third Party Witnesses**

54. **Jonah Alben.** Mr. Alben is the Senior Vice President of GPU Engineering at Nvidia. We expect Mr. Alben to testify about the graphics industry, graphics product offerings, and the evolution and significance of GP GPU computing. We further expect Mr. Alben to testify about Nvidia's graphics hardware and software roadmaps. We further expect Mr. Alben to testify about Nvidia's dealings with Intel, including various partnerships and disputes in developing platforms for computer systems. We further expect Mr. Alben to testify about Nvidia's dealings

with ISVs, OSVs, and OEMs with respect to Nvidia's and Intel's product offerings. We further expect that Mr. Alben will testify about matters discussed or raised in his deposition.

55. **Dan Allen.** Mr. Allen was in charge of the CPU and chipset procurement team at Dell, Inc., and participated in pricing negotiations on behalf of Dell, Inc. with Intel. We expect Mr. Allen to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about Dell's purchases of CPUs, GPUs and/or chipsets for use in Dell's computer products. We further expect Mr. Allen to testify about Dell's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Allen to testify about Dell's relationship with Intel and Intel's business practices. We further expect Mr. Allen to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Allen will testify about the development and marketing of Dell's computers. We further expect that Mr. Allen will testify about matters discussed or raised in his deposition.
56. **Jeff Benck.** Mr. Benck was Vice President for IBM eServer xSeries, BladeCenter, and Intellistation Development. We expect Mr. Benck to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about IBM's purchases of CPUs, GPUs and/or chipsets for use in IBM's computer products. We further expect Mr. Benck to testify about IBM's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Benck to testify about IBM's relationship with Intel and Intel's business practices. We further expect Mr. Benck to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Benck will testify about the development and marketing of IBM's computers. We further expect that Mr. Benck will testify about matters discussed or raised in his deposition.
57. **Joe Beyers.** Mr. Beyers is an executive at HP. We expect Mr. Beyers will testify about any agreements between Intel or AMD and HP related to HP's purchases of CPUs. He will also testify about other agreements between Intel and HP, included but not limited to, Itanium. Mr. Beyers will testify about customer demand for computers utilizing CPUs from Intel or AMD. He will testify about HP's purchases of CPUs. Mr. Beyers will provide testimony about his interactions with Intel, including but not limited to, HP's use of CPUs from suppliers other than Intel. He will also provide testimony about any problems or concerns related to Intel's and AMD's supply of CPUs to HP. He will also provide testimony related to the effect of Intel's sales practices on HP. Mr. Beyers will also testify about matters raised or discussed in his deposition.

58. **James Booth.** Mr. Booth was Vice President of Global Materials and Supply Management at Gateway from September 1998 until August 1999. We expect Mr. Booth to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about Gateway's purchases of CPUs, GPUs and/or chipsets for use in Gateway's computer products. We further expect Mr. Booth to testify about Gateway's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Booth to testify about Gateway's relationship with Intel and Intel's business practices. We further expect Mr. Booth to testify about the netbook, desktop, and notebook, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Booth will testify about the development and marketing of Gateway's computers. We further expect that Mr. Booth will testify about matters discussed or raised in his deposition.
59. **Jeri Calloway.** Ms. Calloway was the Senior Vice President and General Manager of Commercial Desktops at HP, and performed a similar role at Compaq before HP acquired it in 2002. We expect Ms. Calloway to testify about the CPU, GPU, and/or chipset industry. We further expect her to testify about Compaq and HP purchases of CPUs, GPUs and/or chipsets for use in Compaq and HP computer products. We further expect Ms. Calloway to testify about Compaq's and HP's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Ms. Calloway to testify about Compaq's and later HP's relationship with Intel and Intel's business practices. We further expect Ms. Calloway to testify about the desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Ms. Calloway will testify about the development and marketing of Compaq and HP computers. We further expect that Ms. Calloway will testify about matters discussed or raised in her deposition.
60. **Quinn Carter.** Mr. Carter is an engineer with AMD. We expect Mr. Carter to testify about matters related to standard setting, product and technology development, licensing, and compliance testing of technologies such as Azalia/High Definition Audio, DisplayPort, and HDCP for DisplayPort. We further expect Mr. Carter to testify about matters discussed or raised during his deposition.
61. **Tim Chen.** Mr. Chen is responsible for Via's worldwide sales and marketing. We expect Mr. Chen will testify about Via's efforts to sell CPUs and chipsets to OEMs and the impact of Intel's sales practices on Via. We also expect Mr. Chen will testify about Via's CPU performance on industry benchmarks and the effect the results of the benchmarks have on Via's sales. We further expect Mr. Chen will testify about matters discussed or raised in his deposition.

62. **Ted Clark.** Mr. Clark is the Senior Vice President for GM notebook GBU at HP. We expect Mr. Clark to testify about customer demand for notebooks utilizing CPUs from Intel or AMD. He will also provide testimony about any problems or concerns related to Intel's or AMD's supply of CPUs to HP. Mr. Clark will testify about any agreements between Intel or AMD and HP related to HP's purchases of CPUs. He will also testify to his interactions with Intel, including but not limited to, HP's use of CPUs from suppliers other than Intel. He will also provide testimony related to the effect of Intel's sales practices on HP. Mr. Clark will also testify about matters raised or discussed in his deposition.
63. **Jeffrey Clarke.** Mr. Clarke was a senior vice president of the business client product group at Dell, Inc. We expect Mr. Clarke to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about Dell's purchases of CPUs, GPUs and/or chipsets for use in Dell's computer products. We further expect Mr. Clarke to testify about Dell's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Clarke to testify about Dell's relationship with Intel and Intel's business practices. We further expect Mr. Clarke to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Clarke will testify about the development and marketing of Dell's computers. We further expect that Mr. Clarke will testify about matters discussed or raised in his deposition.
64. **Chris Cloran.** Mr. Cloran is Corporate Vice President and General Manager of the Client Division at AMD. Previously, Mr. Cloran was Vice President of AMD's Mobile Division. Mr. Cloran is expected to testify about notebook computers, competitive conditions in the notebook markets, AMD's notebook CPUs, and AMD's relationship with OEMs. Mr. Cloran is also expected to testify about the impact of Intel's business practices on AMD. Further, Mr. Cloran is expected to testify about issues raised during his deposition.
65. **Mark Cohen.** Mr. Cohen is currently Vice President for Notebook Business Management and Enterprise Systems at Lenovo, and has also served as executive Director of Lenovo's notebook unit. We expect Mr. Cohen to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about IBM and later Lenovo's purchases of CPUs, GPUs and/or chipsets for use in computer products. We further expect Mr. Cohen to testify about IBM and later Lenovo's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Cohen to testify about IBM and later Lenovo's relationship with Intel and Intel's business practices. We further expect Mr. Cohen to testify about the netbook, desktop, notebook, servers, and workstations including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Cohen will testify about the development and

marketing of IBM and Lenovo computers. We further expect that Mr. Cohen will testify about matters discussed or raised in his deposition.

66. **Tim Cook.** Mr. Cook is the Chief Operating Officer of Apple, Inc. We expect that Mr. Cook will testify about Apple's purchases of CPUs and graphics. We further expect Mr. Cook to testify about Apple's exclusive agreement with Intel and Apple's purchase and use of Intel CPUs. We further expect Mr. Cook to testify about Apple's interactions with Intel regarding integrated and discreet graphics, including Larrabee. We further expect Mr. Cook to testify about Apple's decisions to use or to not use Intel's graphics, including the importance of graphics capabilities and GPGPU computing to Apple's business and Apple's graphics strategy. We further expect Mr. Cook to testify about Apple's use of third party chipsets and discreet graphics. We further expect Mr. Cook to testify about Apple's use of and knowledge of relevant benchmarks, standard setting and compilers. We further expect that Mr. Cook will testify about matters discussed or raised in his deposition.

67. **Michael Diamond.** Mr. Diamond is the Director, Strategic Marketing. We expect Mr. Diamond to testify about the graphics industry, graphics product offerings, and the evolution and significance of GP GPU computing. We further expect Mr. Diamond to testify about Nvidia's graphics hardware and software roadmaps. We further expect Mr. Diamond to testify about Nvidia's dealings with Intel, including various partnerships and disputes in developing platforms for computer systems. We further expect Mr. Diamond to testify on the formulation and implementation of open and closed industry standards. We further expect Mr. Diamond to testify about Nvidia's dealings with ISVs, OSVs, and OEMs with respect to Nvidia's and Intel's product offerings and industry standards. We further expect that Mr. Diamond will testify about matters discussed or raised in his deposition.

68. **Michael Dell.** Mr. Dell was the CEO and later Chairman of the Board at Dell, Inc. We expect Mr. Dell to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about Dell's purchases of CPUs, GPUs and/or chipsets for use in Dell's computer products. We further expect Mr. Dell to testify about Dell's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Dell to testify about Dell's relationship with Intel and Intel's business practices. We further expect Mr. Dell to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Dell will testify about the development and marketing of Dell's computers. We further expect that Mr. Dell will testify about matters discussed or raised in his deposition.

69. **Agner Fog.** Mr. Fog teaches at the Copenhagen University College of Engineering. Mr. Fog also publishes an online optimization manual for the C++

programming language. We expect Mr. Fog to testify regarding the use of optimization flags in Intel's compilers and the use of CPUID checks in Intel's compilers and libraries. We further expect Mr. Fog to testify about matters discussed or raised in his deposition.

70. **Dan Forlenza.** Mr. Forlenza is Vice President for notebooks at HP. We expect Mr. Forlenza to testify about customer demand for notebooks utilizing CPUs from Intel or AMD. He will also provide testimony about any problems or concerns related to Intel's or AMD's supply of CPUs to HP. Mr. Forlenza will testify about any agreements between Intel or AMD and HP related to HP's purchases of CPUs. He will also provide testimony related to the effect of Intel's sales practices on HP. Mr. Forlenza will also testify to his interactions with Intel, including but not limited to, HP's use of CPUs from suppliers other than Intel. We further expect Mr. Forlenza to testify about issues raised in his deposition.
71. **Lars Giusi.** Mr. Giusi is a Program Manager at Microsoft. We expect Mr. Giusi to testify regarding product and technical developments, and compliance testing of interfaces such as USB, as well as host controller interfaces associated with USB. We further expect Mr. Giusi will testify about his involvement in standard setting groups and similar associations related to USB. We further expect Mr. Giusi to testify about matters discussed or raised in his deposition.
72. **Gerald Glave.** Mr. Glave is former Systems Manager for the United Parcel Service ("UPS"), responsible for developing UPS's global notebook and desktop computer strategy. We expect Mr. Glave to testify about his evaluation of AMD- and Intel-based computers, and UPS's purchase of computer systems. We further expect Mr. Glave to testify about matters discussed or raised during his deposition.
73. **Mike Goddard.** Mr. Goddard was responsible for benchmarking at AMD. We expect that Mr. Goddard will testify about AMD's benchmarking practices and participation in benchmarking organizations such as BAPCO. We further expect Mr. Goddard to testify about matters discussed or raised in his deposition.
74. **Jeff Groudan.** Mr. Groudan is Vice President for thin clients and virtualization at HP. For six years after the HP/Compaq merger, Mr. Groudan was Vice President of Marketing for HP's commercial desktop business. We expect Mr. Groudan to testify about any agreements between Intel or AMD and HP related to HP's purchases of CPUs. He will also testify about other agreements between Intel and HP, included by not limited to, Itanium. Mr. Groudan will testify about customer demand for computers utilizing CPUs from Intel or AMD. He will testify about HP's purchases of CPUs. Mr. Groudan will provide testimony about his interactions with Intel, including HP's use of CPUs from suppliers other than Intel. He will also provide testimony about any problems or concerns related to Intel's and AMD's supply of CPUs to HP. He will also provide testimony related

to the effect of Intel's sales practices on HP. Mr. Groudan will also testify about matters raised or discussed in his deposition.

75. **Jeff Gruger.** Mr. Gruger was the Senior Vice President of Engineering at Newisys from 2003-2007. We expect Mr. Gruger to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about Newisys's purchases of CPUs, GPUs and/or chipsets for use in Newisys's computer products. We further expect Mr. Gruger to testify about Newisys's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Gruger to testify about Newisys's relationship with Intel and Intel's business practices. We further expect Mr. Gruger to testify about the netbook, desktop, and notebook, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We expect Mr. Gruger to testify about Newisys' dealings with IBM. We further expect Mr. Gruger to testify about Newisys' dealings with Sun. We further expect that Mr. Gruger will testify about matters discussed or raised in his deposition.
76. **Phil Hester.** Mr. Hester served as Chief Technology Officer of AMD, CEO of Newisys, and Chief Technology Officer of IBM's PC division. Mr. Hester is expected to testify about the history of, and competitive conditions in the worldwide CPU market. Further, Mr. Hester is expected to testify on AMD's CPU business, and the effect of Intel's business practices on AMD. Mr. Hester is also expected to testify regarding IBM's evaluation of CPUs, and IBM's decision to purchase Intel CPUs for IBM computers. Further, we expect Mr. Hester will testify about Newisys's server business and its attempts to sell servers to OEMs. We further expect Mr. Hester to testify about Newisys's relationship with Intel and AMD. We also expect that Mr. Hester will testify about matters raised or discussed during his deposition.
77. **CJ Holthaus.** Mr. Holthaus joined Via in the early 2000s in connection with Via's acquisition of IDT Inc.'s Centaur design subsidiary. Currently, Mr. Holthaus is Technical Director at Centaur. We expect Mr. Holthaus will be able to testify about Via's CPU performance on industry benchmarks and the effect the results of the benchmarks have on Via's sales. In addition, we also expect Mr. Holthaus will be able to testify about Intel's efforts to stymie interoperability between Via's CPUs and chipsets and Intel hardware. We further expect Mr. Holthaus will testify on matters discussed or raised in his deposition.
78. **Jen-Hsun Huang.** Mr. Huang is the President and CEO of Nvidia. We expect Mr. Huang to testify about the graphics industry, graphics product offerings, and the evolution and significance of GP GPU computing. We further expect Mr. Huang to testify about Nvidia's graphics hardware and software roadmaps. We further expect Mr. Huang to testify about Nvidia's dealings with Intel, including various partnerships and disputes in developing platforms for computer systems. We further expect Mr. Huang to testify about Nvidia's dealings with ISVs, OSVs,

and OEMs with respect to Nvidia's and Intel's product offerings. We further expect that Mr. Huang will testify about matters discussed or raised in his deposition.

79. **Louis Kim.** Mr. Kim was the Director of Commercial Desktop Group at HP after having served a similar role at Compaq at the time HP acquired it in 2002. We expect Mr. Kim to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about Compaq and HP purchases of CPUs, GPUs and/or chipsets for use in Compaq and HP computer products. We further expect Mr. Kim to testify about Compaq's and HP's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Kim to testify about Compaq's and HP's relationship with Intel and Intel's business practices. We further expect Mr. Kim to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Kim will testify about the development and marketing of Compaq and HP's computers. We further expect that Mr. Kim will testify about matters discussed or raised in his deposition.

80. **Joe Lee.** Mr. Lee was the Vice President for the Intel Strategic Alliance since 2003 at HP. We expect Mr. Lee to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about HP's purchases of CPUs, GPUs and/or chipsets for use in HP's computer products. We further expect Mr. Lee to testify about HP's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Lee to testify about HP's relationship with Intel and Intel's business practices. We further expect Mr. Lee to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Lee will testify about the development and marketing of HP's computers. We further expect that Mr. Lee will testify about matters discussed or raised in his deposition.

81. **Alan Luecke.** Mr. Luecke is a former procurement official and technical engagement coordinator at Dell, Inc. We expect Mr. Luecke to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about Dell's purchases of CPUs, GPUs and/or chipsets for use in Dell's computer products. We further expect Mr. Luecke to testify about Dell's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Luecke to testify about Dell's relationship with Intel and Intel's business practices. We further expect Mr. Luecke to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Luecke will testify about the development and marketing of Dell's computers. We further



expect that Mr. Luecke will testify about matters discussed or raised in his deposition.

82. **Bob Mansfield.** Mr. Mansfield is the VP of Engineering for Apple. We expect that Mr. Mansfield will testify about the competitive dynamics of the CPU and graphics markets. We further expect that Mr. Mansfield will testify about Apple's exclusive agreement with Intel and Apple's purchase and use of Intel CPUs. We further expect Mr. Mansfield to testify about Apple's interactions with Intel regarding integrated and discreet graphics, including Larrabee. We further expect Mr. Mansfield to testify about Apple's decisions to use or to not use Intel's graphics, including the importance of graphics capabilities and GPGPU computing to Apple's business and Apple's graphics strategy. We further expect Mr. Mansfield to testify about Apple's use of third party chipsets and discreet graphics. We further expect Mr. Mansfield to testify about Apple's use of and knowledge of relevant benchmarks, standard setting and compilers. We further expect that Mr. Mansfield will testify about matters discussed or raised in his deposition.
83. **Dirk Meyer.** Mr. Meyer is President and CEO of AMD. We expect Mr. Meyer to testify about competitive conditions in the worldwide CPU markets, including CPU prices, sales to OEMs, entry conditions, and the impact of Intel's business practices on AMD's business. We also expect that Mr. Meyer will testify about matters raised or discussed during his deposition.
84. **Daryl Ostrander.** Mr. Ostrander was Senior Vice President, Manufacturing and Technology, CPU Solutions Sector at AMD. Mr. Ostrander is expected to testify about AMD's CPU manufacturing, including its manufacturing capacity and capabilities. Further, Mr. Ostrander is expected to testify about issues raised during his deposition.
85. **Mark Overby.** Mr. Overby is Chief Architect at Nvidia. We expect Mr. Overby to testify regarding standard setting, product and technology development, licensing, and compliance testing of technologies such as Universal Serial Bus, Serial ATA, and Azalia/High Definition Audio. We further expect Mr. Overby to testify about matters discussed or raised during his deposition.
86. **John Principe.** Mr. Principe was a business executive at IBM. We expect Mr. Principe to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about IBM purchases of CPUs, GPUs and/or chipsets for use in IBM's computer products. We further expect Mr. Principe to testify about IBM's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Principe to testify about IBM's relationship with Intel and Intel's business practices. We further expect Mr. Principe to testify about the netbook, desktop, notebook, servers, and workstations including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further

expect that Mr. Principe will testify about matters discussed or raised in his deposition.

87. **David Rasmussen.** Mr. Rasmussen was Director of IBM's Intel Alliance. We expect Mr. Rasmussen to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about IBM's purchases of CPUs, GPUs and/or chipsets for use in IBM's computer products. We further expect Mr. Rasmussen to testify about IBM's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Rasmussen to testify about IBM's relationship with Intel and Intel's business practices. We further expect Mr. Rasmussen to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Rasmussen will testify about the development and marketing of IBM's computers. We further expect that Mr. Rasmussen will testify about matters discussed or raised in his deposition.
88. **Charles Reese.** Mr. Reese is an IBM Program Director for e-Server Technical Alliances. We expect Mr. Reese to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about IBM's purchases of CPUs, GPUs and/or chipsets for use in IBM's computer products. We further expect Mr. Reese to testify about IBM's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Reese to testify about IBM's relationship with Intel and Intel's business practices. We further expect Mr. Reese to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Reese will testify about the development and marketing of IBM's computers. We further expect that Mr. Reese will testify about matters discussed or raised in his deposition.
89. **Henri Richard.** Mr. Richard is Senior Vice-President, Chief Sales and Marketing Officer for Freescale Semiconductor. Previously, Mr. Richard was Chief Sales and Marketing Officer for AMD. Mr. Richard is expected to testify about competitive conditions in the worldwide CPU markets. Mr. Richard is also expected to testify about AMD's products, and the impact of Intel's business practices on AMD's ability to develop, market and sell its products. We also expect that Mr. Richard will testify about matters raised or discussed during his deposition.
90. **Robert Rivet.** Mr. Rivet is Executive Vice President and Chief Operations and Administrative Officer for AMD. Previously, Mr. Rivet served as AMD's Chief Financial Officer. Mr. Rivet is expected to testify about AMD's financial stability, the allocation of financial and other resources within AMD, and the

impact of Intel's business practices on those decisions. We also expect that Mr. Rivet will testify about matters raised or discussed during his deposition.

91. **Kevin Rollins.** Mr. Rollins was the president and chief operating officer and later the CEO at Dell, Inc. We expect Mr. Rollins to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about Dell's purchases of CPUs, GPUs and/or chipsets for use in Dell's computer products. We further expect Mr. Rollins to testify about Dell's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Rollins to testify about Dell's relationship with Intel and Intel's business practices. We further expect Mr. Rollins to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Rollins will testify about the development and marketing of Dell's computers. We further expect that Mr. Rollins will testify about matters discussed or raised in his deposition.
92. **Antonio P. Salerno.** Mr. Salerno is the CEO of SuperGrids and former CEO of Conxion. Mr. Salerno is expected to testify regarding his evaluation and use of AMD- and Intel-based servers, as well as the procurement of AMD- and Intel-based servers. Mr. Salerno is also expected to testify to matters raised during his deposition.
93. **Jerry Sanders.** Mr. Sanders was co-founder and CEO of AMD. Mr. Sanders is expected to testify about the development of the CPU, AMD's history with Intel (including prior legal proceedings), AMD's and Intel's products, and competitive conditions in the worldwide CPU markets. Further, Mr. Sanders is expected to testify regarding the impact of Intel's practices on AMD. We also expect that Mr. Sanders will testify about matters raised or discussed during his deposition.
94. **Berni Schieffer.** Mr. Schieffer is a Distinguished Engineer at IBM Corporation. Mr. Schieffer is responsible for the technology used to develop IBM's DB2 product. We expect Mr. Schieffer to testify about the CPU, GPU, compilers/libraries, and/or chipset industries. We further expect Mr. Schieffer to testify about IBM's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Schieffer to testify about IBM's relationship with Intel and Intel's business practices. We further expect that Mr. Schieffer will testify about matters discussed or raised in his deposition. We further expect Mr. Schieffer to testify about compilers, including Intel representations about its compilers and IBM's experience using Intel compilers and non-Intel compilers. We further expect that Mr. Schieffer will testify about matters discussed or raised in his investigational hearing.
95. **James Schneider.** Mr. Schneider was the chief financial officer at Dell, Inc. We expect Mr. Schneider to testify about the CPU, GPU, and/or chipset industry. We

further expect him to testify about Dell's purchases of CPUs, GPUs and/or chipsets for use in Dell's computer products. We further expect Mr. Schneider to testify about Dell's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Schneider to testify about Dell's relationship with Intel and Intel's business practices. We further expect Mr. Schneider to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Schneider will testify about the development and marketing of Dell's computers. We further expect that Mr. Schneider will testify about matters discussed or raised in his deposition.

96. **Jonathan Schwartz.** Mr. Schwartz was President and CEO of Sun Microsystems from 2006 until early 2010 when Oracle completed its acquisition of Sun. We expect Mr. Schwartz to testify about Sun's evaluation and purchase of CPUs, including Sun's decision to purchase AMD CPUs, during the time that he was CEO of Sun. In addition, we expect Mr. Schwartz will provide testimony relating to the benchmarks Sun uses to evaluate its products. We also expect Mr. Schwartz to testify about the actions that Intel took to pressure Sun to purchase Intel CPUs. We further expect Mr. Schwartz will testify about matters discussed or raised in his deposition.

97. **Jerry Vogel.** Mr. Vogel is Vice President of Customer Program Management at Nvidia. Mr. Vogel was previously Senior Vice President, Microprocessor Engineering and Product Management at AMD. Mr. Vogel is expected to testify about the manufacturing, testing, scheduling and supply of CPUs, including testimony specific to AMD CPUs. Further, Mr. Vogel is expected to testify about issues raised during his deposition.

98. **Martin Watt.** Mr. Watt is a former employee of Autodesk, Inc. We expect that Mr. Watt will testify about matters relating to his use of software development products such as Intel's compiler and Intel libraries while at Autodesk. We further expect Mr. Watt to testify about matters discussed or raised in his deposition.

99. **Ronald Yara.** Mr. Yara is the founder and former CEO of S3 Graphics Ltd. and a venture capitalist in the field of graphics processors and related products. We expect Mr. Yara to testify generally about the interface of the graphics processor and microprocessor industries, and the impact of current technology related to graphics processors on microprocessors. We also expect Mr. Yara to testify regarding his experience with Intel while at S3 and as a venture capitalist for other graphics processor manufacturers. We further expect Mr. Yara to testify about issues raised in his deposition.

100. **Duane Zitzner.** Mr. Zitzner was Executive Vice President of the Personal Systems Group at HP. We expect Mr. Zitzner to testify about the CPU,

GPU, and/or chipset industry. We further expect him to testify about HP's purchases of CPUs, GPUs and/or chipsets for use in HP's computer products. We further expect Mr. Zitzner to testify about HP's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Zitzner to testify about HP's relationship with Intel and Intel's business practices. We further expect Mr. Zitzner to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Zitzner will testify about the development and marketing of HP's computers. We further expect that Mr. Zitzner will testify about matters discussed or raised in his deposition.

**COMPLAINT COUNSEL'S GOOD FAITH IDENTIFICATION OF  
ADDITIONAL WITNESSES THAT MIGHT BE CALLED IN THIS  
PROCEEDING**

The following individuals are our good faith designation of additional witnesses who may be included in our final witness list. Our efforts to refine the witness list have been hampered by discovery delays. We will notify Intel promptly of any changes to the witness list.

101. **Vishnu Balraj.** Vishnu Balraj is involved with the HD Audio specification at Intel. We expect Vishnu Balraj to testify regarding specifications, product and technology development and compliance testing of Azalia/HD Audio. We further expect Vishnu Balraj to testify about matters discussed or raised in his deposition.
  
102. **Fred Bhesania.** Mr. Bhesania is Principal Program Manager at Microsoft. We expect Mr. Bhesania to testify regarding product and technical developments, and compliance testing of interfaces such as USB, as well as host controller interfaces associated with USB. We further expect Mr. Bhesania will testify about his involvement in standard setting groups and similar associations related to USB. We further expect Mr. Bhesania to testify about matters discussed or raised in his deposition.
  
103. **Bryant Bigbee.** Mr. Bigbee is a Senior Fellow at Intel, Software Services Group. Bigbee directs work on the design and optimization of CPU and chipset interfaces to operating systems, drivers and firmware. Bigbee joined Intel in 1992 and has been involved with a wide variety of commercial operating system and firmware initiatives. Mr. Bigbee is expected to testify about Intel software strategies, including CPU and vendor-specific optimizations in Intel software development products, and the information provided about those optimizations to customers of Intel software development tools. We further expect Mr. Bigbee to testify about matters discussed or raised in his deposition.

104. **Mark Boles.** Mr. Boles is head of OSV Strategic Alliances at Intel, and was previously director of Intel's Microsoft Program Office. We expect Mr. Boles to testify regarding interactions with Microsoft and other OSVs regarding operating system features and operating system support for features and technologies implemented in Intel products, such as USB and SATA. We further expect Mr. Boles to testify about matters discussed or raised in his deposition.
105. **Bala Cadambi.** Mr. Cadambi is Director of I/O Technologies and Standards at Intel. We expect Mr. Cadambi to testify regarding specifications, product and technology development, and compliance testing of interfaces such as Universal Serial Bus, PCI Express, and Quick Path Interconnect. We further expect Mr. Cadambi to testify about matters discussed or raised in his deposition.
106. **Michael Capellas.** Mr. Capellas was the Chairman and CEO of Compaq between 1999 and 2001. After HP acquired Compaq in 2002, Mr. Capellas served as President of HP. We expect Mr. Capellas to testify about the CPU, GPU, and/or chipset industry. We further expect him to testify about Compaq and HP purchases of CPUs, GPUs and/or chipsets for use in Compaq and HP computer products. We further expect Mr. Capellas to testify about Compaq's and HP's evaluation and opinion of Intel and competing CPU, GPU, and chipset manufacturers' products and strategy. We further expect Mr. Capellas to testify about Compaq's and HP's relationship with Intel and Intel's business practices. We further expect Mr. Capellas to testify about the netbook, desktop, notebook, server, and workstation markets, including technological differences between segments, differing needs of end-users, and requirements of different computer purchases. We further expect Mr. Capellas will testify about the development and marketing of Compaq and HP computers. We further expect that Mr. Capellas will testify about matters discussed or raised in his deposition.
107. **Matt Dunford.** Mr. Dunford is a Client Performance Manager at Intel. We expect Mr. Dunford to testify about benchmarks and the relative performance between Intel and non-Intel CPUs and how Intel's compiler, tools and libraries impact relative performance. We further expect Mr. Dunford to testify about matters discussed or raised in his deposition.
108. **Ron Friedman.** Mr. Friedman is vice president and general manager of Microprocessor and Chipset Development. We expect Mr. Friedman to testify about Intel's CPU roadmap and graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Friedman to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Friedman to testify about Intel's graphics strategy. We further expect Mr. Friedman to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect Mr. Friedman to testify about matters discussed or raised in his deposition.

109. **Knut Grimsrud.** Mr. Grimsrud is an Intel Fellow and serves as chairman of the board for the Serial ATA International Organization. We expect Mr. Grimsrud to testify regarding specifications, product and technology development and compliance testing for storage technologies such as Serial ATA. We further expect Mr. Grimsrud to testify about matters discussed or raised in his deposition.
110. **Amber Huffman.** Ms. Huffman is a Principal Engineer in the Storage Technologies Group at Intel. We expect Ms. Huffman to testify regarding specifications, product and technology development and compliance testing of storage technologies such as Serial ATA. We further expect Ms. Huffman to testify about matters discussed or raised in her deposition.
111. **Jonathan Khazam.** Mr. Khazam was responsible for the development and commercialization of compiler technology for Intel. We expect Mr. Khazam to testify about Intel's strategy concerning the development of its compilers and software development tools, including the use of Cupid and multiple code path technology. We further expect Mr. Khazam to testify about matters discussed or raised in his deposition.
112. **Johnny Lee.** Mr. Lee is Vice President, Business Development. We expect Mr. Lee will testify about Via's efforts to sell CPUs and chipsets to OEMs and the impact of Intel's sales practices on Via. We also expect Mr. Lee will provide testimony relating to Via's CPU performance on industry benchmarks and the effect the results of the benchmarks have on Via's sales. In addition, we also expect Mr. Lee will be able to testify about Intel's efforts to stymie interoperability between Via's CPUs and chipsets and Intel hardware. We further expect Mr. Lee will testify about matters discussed or raised in his deposition.
113. **Alberto Martinez.** Mr. Martinez works on architecture for Intel's ICH components. We expect Mr. Martinez to testify regarding Intel strategy for development of technologies such as USB and SATA, in Intel chipsets. We also expect Mr. Martinez to testify regarding features and roadmaps of Intel chipsets. We further expect Mr. Martinez to testify about matters discussed or raised in his deposition.
114. **Rick McCallum.** Mr. McCallum is a senior officer at Lucasfilm, and producer of the Star Wars films. Mr. McCallum is expected to testify about Lucasfilm's use of AMD server products and his experience procuring servers. We further expect Mr. McCallum to testify about matters discussed or raised in his deposition.
115. **Steve McGowan.** Mr. McGowan is a Senior Architect at Intel. We expect Mr. McGowan to testify regarding specifications, product and technology development and compliance testing of interfaces such as USB and XHCI. We further expect Mr. McGowan to testify about matters discussed or raised in his deposition.

116. **Paul Miller.** Mr. Miller is Vice President for Marketing of Enterprise Storage and Server Group at HP. We expect Mr. Miller to testify, among other things, about HP dealings with Intel including communications, negotiations, payments and agreements between the companies. We further expect Mr. Miller to testify about HP's evaluation and opinion of Intel, AMD, and other CPU manufacturers' roadmaps, quality, features, and price. We further expect Mr. Miller to testify about the server market, including technological differences between products, differing needs of end-users, and requirements of different purchasers. We further expect Mr. Miller to testify about matters discussed or raised in his deposition.
117. **Nathan Obr.** Mr. Obr is a Storage Driver Developer at Microsoft. We expect Mr. Obr to testify regarding specifications, product and technical developments, and compliance testing of interfaces such as SATA and the T13 standards setting group, as well as host controller interfaces associated with the SATA. We further expect Mr. Obr to testify about matters discussed or raised in his deposition.
118. **Matthew J. Parker.** Mr. Parker is an employee of Intel Corporation. We expect Mr. Parker to testify about Intel's CPU roadmaps, graphics hardware, chipset hardware and buses, and software roadmaps and competitive assessments of the same. We further expect Mr. Parker to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Parker to testify about Intel's graphics strategy, and the use of graphics hardware and software in general purpose computing. We further expect that Mr. Parker will testify about matters discussed or raised in his deposition.
119. **Alex Peleg.** Mr. Peleg is vice president, Intel Architecture Group and director of Intel Architecture Strategic Platform Planning and Corporate Platform Initiatives. We expect Mr. Peleg to testify about Intel's CPU roadmaps and graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Peleg to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Peleg to testify about Intel's graphics strategy, including the importance of graphics to OEMs, ODMs and other third parties, and the use of graphics hardware and software in general purpose computing. We further expect Mr. Peleg to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect that Mr. Peleg will testify about matters discussed or raised in his deposition.
120. **Tim Prince.** Mr. Prince is a technical software engineer at Intel. Mr. Prince is responsible for providing technical support for independent software vendors using Intel software products. Mr. Prince will testify about advice provided to ISVs concerning their choices of compilers and tools, optimization assistance given to ISVs, and the effect of such assistance on the performance of



Intel and non-Intel CPUs. We further expect Mr. Prince to testify about matters discussed or raised in his deposition.

121. **David Puffer.** Mr. Puffer is a Principal Engineer at Intel Corporation. We expect Mr. Puffer to testify about Intel's CPU roadmaps, graphics hardware, chipset hardware, and software roadmaps and competitive assessments of the same. We further expect Mr. Puffer to testify about Intel's dealings with third party graphics vendors. We further expect Mr. Puffer to testify about Intel's graphics strategy, and the use of graphics hardware and software in general purpose computing. We further expect that Mr. Puffer will testify about matters discussed or raised in his deposition.

122. **Jeff Ravencraft.** Mr. Ravencraft is a Technology Strategist at Intel Corporation, and also serves as Chairman/President of the USB Implementers' Forum. We expect Mr. Ravencraft to testify regarding specifications, product and technology development, and compliance testing of interfaces such as Universal Serial Bus. We further expect Mr. Ravencraft to testify about matters discussed or raised in his deposition.

123. **James Reinders.** Mr. Reinders is the Chief Evangelist and Director of Marketing and Business, Software Development Products at Intel. Mr. Reinders was the Chief Evangelist and Director of Marketing for Intel's Software Development Products. We expect that Mr. Reinders will testify about performance and CPU or vendor-specific aspects of Intel software development products and the information provided about those topics to customers of Intel software development tools. We further expect Mr. Reinders to testify about matters discussed or raised in his deposition.

124. **Hakon Strande.** Mr. Strande is a Program Manager for Windows Media and Devices Group at Microsoft. We expect Mr. Strande to testify regarding product and technical developments, and compliance testing of interfaces such as HD Audio, as well as host controller interfaces associated with HD Audio. We further expect Mr. Strande will testify about his involvement in standard setting groups and similar associations related to USB. We further expect Mr. Strande will testify about matters discussed or raised in his deposition.

125. **Robert Strong.** Mr. Strong is a Platform Architect at Intel Corporation. We expect Mr. Strong to testify regarding specifications, product and technology development, and compliance testing of interfaces such as SATA and the T13 standards setting group. We further expect Mr. Strong to testify about matters discussed or raised in his deposition.

126. **Will Swope.** Will Swope is corporate vice president and general manager of Intel's Corporate Sustainability Group. Formerly he was general manager of the Software and Solutions Group (SSG), reporting to the president and chief operating officer of Intel. In that capacity he managed the software products and

enabling efforts within SSG. We expect Mr. Swope to testify about Intel's dealings with ISVs. We further expect Mr. Swope to testify about Intel's dealings with One Laptop Per Child. We further expect that Mr. Swope will testify about matters discussed or raised in her deposition.

127. **David Tuhy.** Mr. Tuhy is part of Intel's Nvidia Program Office. We expect Mr. Tuhy to testify about Intel's graphics hardware and software roadmaps and competitive assessments of the same. We further expect Mr. Tuhy to testify about Intel's dealings with third party vendors. We further expect Mr. Tuhy to testify about Intel's graphics strategy, including the importance of graphics to OEMs, ODMs and other third parties, and the use of graphics hardware and software in general purpose computing. We further expect Mr. Tuhy to testify about Intel's dealings with ISVs, OSVs and other software developers with respect to Intel graphics hardware and software. We further expect that Mr. Tuhy will testify about matters discussed or raised in his deposition.

128. **Jeff Tripaldi.** Mr. Tripaldi is the manger of the Apple account at Intel. Prior to this role, Mr. Tripaldi held positions such as director of Intel's worldwide Ignite campaign, and various positions within Intel's Business Operations group. We expect Mr. Tripaldi to testify about Intel's business dealings with Apple, including but not limited to, sales negotiations and agreements between Intel and Apple, joint development and marketing projects, product discussions, and product supply issues. We further expect Mr. Tripaldi to testify about issues raised in his deposition.

129. **Sean Varah.** Mr. Varah is the CEO of Motion DSP. We expect Mr. Varah to testify about how Motion DSP's products utilize GPU computing and its importance to his company's products. We further expect Mr. Varah to testify about his interactions with Intel and graphics hardware vendors. We further expect Mr. Varah to testify about issues raised in his deposition.

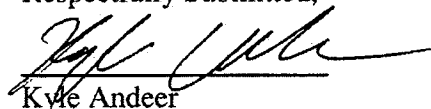
130. **Chris Walker.** Chris Walker is the Director of Microprocessor Marketing and Business Planning. In that role, Mr. Walker is responsible for core business operations for Intel's CPU and associated Chipset products, including demand forecasting, pricing, supply strategies and product roadmap positioning. We expect that Mr. Walker will testify about Intel's relationship with various OEMs and ODMs, including negotiations with Tier One OEMs for the purchase and sale of CPUs. We also expect Mr. Walker to testify about competition in both the CPU and graphics markets. We further expect that Mr. Walker will testify about matters discussed or raised in his deposition.

131. **Jayson Wang.** Mr. Wang is a developer at Livermore Software Technology Corporation. We expect Mr. Wang to testify about his use of Intel software tools and libraries and the impact that it had on the development of LS-DYNA software. We further expect Mr. Wang to testify about matters discussed or raised in his deposition.

132. **Don Whiteside.** Mr. Whiteside was Vice President of the Corporate Technology Group and Director of Technical Policy and Standards at Intel. We expect Mr. Whiteside to testify regarding Intel's policies and strategies with respect to standard setting organizations and standards. We further expect Mr. Whiteside to testify about matters discussed or raised at his deposition.
133. **Paul Wiley.** Mr. Wiley is a Principal Engineer for Performance Technology and Analysis at Intel. We expect Mr. Wiley to testify about benchmarking and the effect of Intel compiler and tool technology on benchmarking. We further expect Mr. Wiley to testify about matters discussed or raised in his deposition.
134. **Devon Worrell.** Mr. Worrell is a Mobile Audio Architect at Intel. We expect Mr. Worrell to testify regarding specifications, product and technology development and compliance testing of audio technologies such as Azalia/HD Audio. We further expect Mr. Worrell to testify about matters discussed or raised in his deposition.
135. **Jason Ziller.** Mr. Ziller is the Director of Intel's Optical I/O Program Office. Previously, Mr. Ziller served as USB-Implementer's Forum Chairman and President, and SATA International Organization Chairman. We expect Mr. Ziller to testify regarding specifications, product and technology development, and compliance testing of interfaces such as Universal Serial Bus and SATA. We further expect Mr. Ziller to testify about matters discussed or raised in his deposition.
136. **Advanced Micro Devices Corporate Representative.** To the extent not identified above, Complaint Counsel will call an AMD witness to testify about (1) competitive conditions in the worldwide microprocessor market(s); (2) entry conditions in the microprocessor market(s); (3) AMD's dealings with OEMs and ODMs; (4) AMD's products; (5) the research, development, production, supply, marketing and sale of AMD products; (6) graphics; (7) the impact of Intel's business practices on AMD and the microprocessor markets(s); (8) compilers; (9) benchmarks; and (10) matters related to interface standards such as AMD's involvement with standard setting bodies, schedules for completion and implementation of those standards, and licensing of those standards.
137. **Hewlett Packard Corporate Representative.** Complaint Counsel will call as witnesses corporate representatives of HP to testify generally regarding: (1) HP's graphics and parallel computing strategy, including the importance of graphics and GPGPU computing and HP's assessment of Intel or third party graphics hardware and software roadmaps; (2) compilers; (3) benchmarks; (4) matters related to interface standards such as HP's involvement with standard setting bodies, schedules for completion and implementation of those standards,

and licensing of those standards; and (5) HP's purchase of CPUs and chipsets as part of a kit or bundle.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Kyle Andeer", written over a horizontal line.

Kyle Andeer  
Counsel Supporting the Complaint  
Bureau of Competition  
Federal Trade Commission  
601 New Jersey Avenue NW  
Washington, D.C. 20580

May 5, 2010

**CERTIFICATE OF SERVICE**

I certify that I delivered via electronic mail one copy of Complaint Counsel's Revised Preliminary Witness List to:

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Eric Mahr  
Wendy A. Terry  
Wilmer Cutler Pickering Hale & Dorr  
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*Counsel for Defendant  
Intel Corporation*

May 5, 2010

By:



Kyle Andeer  
Federal Trade Commission  
Bureau of Competition

# Exhibit C

No Public Version Available

**Exhibit D**  
**No Public Version Available**

## Exhibit E

No Public Version Available



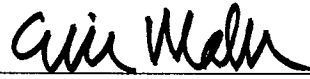
## Exhibit F

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WILMER CUTLER PICKERING HALE AND  
DORR LLP



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*Attorney for Intel Corporation*

Dated: May 17, 2010