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**From:** Mike Porter  
**Sent:** Sunday, August 09, 1998 11:15 PM  
**To:** Bill Gates; Paul Maritz; Jim Allchin (Exchange); Moshe Dunie; Carl Stork (Exchange); Bob Muglia (Exchange); Joachim Kempin; Steve Ballmer  
**Cc:** Marshall Brumer; Eric Rudder  
**Subject:** Intel Meeting: Prep for 8/17 with Andy/Craig

Bill, this email is in preparation for your Craig/Andy meeting on 8/17. Marshall and I will see you at 11:00am if you have any questions or need additional information.

#### Security

Intel has given us an initial lightweight/marketing disclosure of their plans to add hardware security primitives into their soon to be released processors and chipsets. The first two of these primitives are a random number generator and a unique platform ID. Intel has stated that they had IP in their corresponding driver and software, and they would like us to simply ship their code and use their APIs. We are currently awaiting a technical disclosure, schedule for August 14th. Key concerns here are the business model Intel intends to pursue here. Are they planning to build a business around security? If so, what's their model. How do we support Intel's hardware in the OS, while allowing an open platform for others to plug into later? We have cleared the legal road blocks via a extended CITA model from the PaulMa email last week.

#### PC 1999/PC 2000

We have just wrapped up our PC 99 Hardware Design Guide work. Intel is requesting that we announce public plans to work on a PC 2000 spec. At this time, the team is evaluating their options in this space, and aren't ready to commit to anything. We need a few more weeks to close on what the right plan is to put in place.

#### Manageability

Probably more so than at any other time you may have met with Intel in recent years, we are very much aligned and working well together in this space today. Only flag here is that Intel would like us to add the client side manageability bits into Windows 98. We have just sent Intel the definitive answer that we will not put this into Windows 98 in SP or otherwise. The logic here is that we are not wanting to enable any more DMI out there than is already necessary. WinNT 5.0 will have this and will be the platform of choice for WBEM moving forward. For customers needing this functionality, they can still go to Intel to get it.

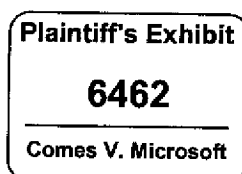
#### Processor/Hardware Support

Only area of contention here is in regard to Katmai (shipping in Q199) and NT 4.0 support. Intel doesn't believe the NT 5.0 adoption will be that high. That, coupled with the fact that NT 4.0 can't take advantage of the Katmai New Instructions (MMX2), Intel feels that Katmai is a non-starter. Jim Allchin proposed an idea to Pat Gelsinger last week that we should go find way to take advantage of the non-MMX2 instructions (things that don't rely on a new context record). There are several "block" instructions in the Katmai instruction set, including a very high speed block copy and block zero. We have seen specweb improvements of 4-8% just by adding the block zero function to replace the macro currently used in the TCP/IP stack. It is believed we should be able to get this into an NT 4.0 service pack, if we move quickly. Gelsinger seemed pleased with our commitment to do whatever we can to support Intel here.

It's just come to my attention that Intel is actually not happy with this plan and wants to raise this issue during your meeting. Pat Gelsinger and Dan Russell thought the JimAll solution would be great, but when taken back to Albert Yu, he was very unhappy. They want to see the same level of support as we have in Win98.

#### Graphics/3D

The working relationship has continued to improve. Only current issue here relates to an OpenGL driver agreement that we are still negotiating. Intel object to the fact that this license agreement requires their driver to pass WHQL certification before allowing them to release to the public. In the interim, Intel has shipped a "clean-room" version of an OpenGL driver (from Silicon Graphics if I remember correctly) until they can (1) get their driver to pass WHQL and (2) try



an re-negotiate the terms. Their 740 silicon is fairly broken, and it should be a challenge to get through WHQL.

#### **Windows CE**

The work on AutoPC continues, and Harel hosts monthly status calls with Ganesh at Intel. We are approaching a point where we will probably need to execute some sort of agreement to allowing Microsoft and Intel to pass code and optimizations back and forth. While things are running smoothly at the working level, and Intel seems quite committed to StrongARM, Harel (and I) would like you to check out their current thinking in the set-top box/living room.

#### **Ease of Use/TCO/"Low Cost" PC**

We have begun early discussion both at the Pat Gelsinger/Jim Allchin level as well as various technical groups for the purpose of reducing the amount of "legacy hardware" in a PC. The Janus OS team has started early work in engaging Intel for a list of requirements here. While David Cole is out, Bill Vehgte has been working this aspect of the relationship. No flags here, but is beginning to appear that Intel is getting quite serious at introducing a "legacy free" PC, and they are planning on demoing such a system at their IDF in September. There have been some marketing and business discussion about "low cost PCs" and "low cost operating systems". Early progress shows that Intel doesn't like a market defined by price point, and are considering other models, such as a simplicity or legacy-compatibility model. Thinking is very "raw" at this stage.

#### **Legal/IP Issues**

Good progress here of recent. Bottom line is that Intel is looking for a more "Open" IP licensing model and we will continue to use due diligence when we engage Intel.



Prep for Friday 8/7  
Gelsinger ...



RE: Intel

#### **IDF**

Intel feels that they have been participating with us at WinHEC and have asked for MS speakers at their IDF. We have yet to resolve this but will have some MS folks attending and probably participating.

#### **Chrome**

While Microsoft is still on track to deliver Chrome, our business agreement to take some code and development assistance from Intel in exchange for marketing support with web content providers fell through. The Chrome team has approached, and subsequently inked some sort of deal with AMD, and Intel is still smarting from this move. I'm not sure this will come up, but it might. We have done our best here, and Intel was simply unwilling to put the marketing dollars on the line for the major web content houses to develop Chrome content.

#### **Windows 98**

Intel has pulled together their needs for fixes/additions to Windows 98, and both Microsoft and Intel are very aligned on the (1) feature set and (2) timing. We are tracking well with Intel here.

#### **WHQL**

We have been working with Intel over the past several months to address Intel's concerns with the WHQL program. We are close to reaching agreement on a working model, but bottom line is that Intel can influence the specs, Microsoft and Intel will mutually work to develop tests to test compliance to the specifications, with the goal being "self-test" for hardware manufacturers.

#### **Server Appliance**

We have started to engage Intel on the "server appliance" project and the initial work is running smoothly. It appears that we will be adding Compaq to this work as well. No flags here. Very early/definition work occurring right now.

#### **Sundown (Win64)**

Work on Win64 has proceeded quite nicely, and Intel should be pleased. There were some initial difficulties in timelines, quality of Intel checkins and human resources, and boot models, but it appears the major issues have been resolved. Industry reports on Merced's timeline have recently been more negative, assuming McKinley (2nd generation Merced) will actually be the "real" Merced. Due to the Intel schedule slip for Merced, we have actually been doing much of the 64-bit work on the Alpha platform. We have several Intel engineers on the project, and work has been moving along smoothly, with quarterly JimAll review with Intel management. No flags that I am aware of here.

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**From:** Marshall Brumer  
**Sent:** Thursday, August 06, 1998 10:28 PM  
**To:** Paul Maritz  
**Cc:** Mike Porter; Kay Barber-Eck; Kate Sako (LCA); Michele Herman (LCA)  
**Subject:** Prep for Friday 8/7 Gelsinger call

**Importance:** High

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**From:** Paul Maritz  
**Sent:** Friday, August 07, 1998 12:25 PM  
**To:** Bill Gates; Carl Stork (Exchange); Jim Allchin (Exchange); Bob Muglia (Exchange); Joachim Kempin; Steve Ballmer  
**Cc:** Marshall Brumer; Eric Rudder; Mike Porter; Craig Mundie  
**Subject:** RE: Intel

Marshall, Mike Porter, I had call this am with Pat Gelsinger et al at Intel. The specific topic was the IP issue, and I also asked about upcoming Billg mtg.

1. On the IP question, we appear to have made progress, and I think it is about as good as we could and should hope for. Specifically, they have agreed to use a modification of our existing CITA-type agreement (which is much less cumbersome than PSA-type agreement, which we use for when we are actually exchanging software) for purposes of disclosing their initiatives to us BEFORE they have lined up other partners etc and present us with what amount to "done deals" that we either roll over on or walk away from. Specifically they will use this to disclose their work on processor security/identity to us. The modification to the CITA is to suspend para 5.10 which says that MS can do whatever it wants with the information in software and Intel can conversely do whatever it wants in hardware. The rest of the CITA stands – the confidentiality protection, the residuals protection, etc.
2. Further they accept that expecting us to buy into "Open IP" in all initiative cases is unrealistic. On Bluetooth and WfM 2.0, they think they can't back out of their commitments, but ongoing forward basis (eg. WfM 3.0, NGIO) they are willing to discuss things with us and try to find acceptable positions, perhaps by segmenting the spec's into different levels or buckets with different IP commitment for each.
3. In general, I think we have to be realistic and realize that we have both (Intel and MS) become a lot more sensitive to a priori giving up IP, and that either of us insisting that we respectively give up IP by discussing things will mean that discussions end. Hence I think the above step is good one. Thus I wouldn't raise this as issue with Andy other than to say that it is important to execute the spirit of what was agreed to today – eg. it is important that Intel promptly come up now and meaningfully discuss processor id/security (which Gelsinger has today agreed to do) as opposed to what they were saying here is a binary device driver, all you can know or decide is to ship it or not ship it, we won't tell you about anything else.

In terms of the Billg/Andy/Barret meeting, Gelsinger said that:

- They are going to ask the SteveB attend to "balance attendance of Barret".
- The points that Andy/Barret will make are that they want to find ways of ironing out what they see as repeated highs and lows in our relationship, which they see having been caused by the perennial IP issues, not having our roadmaps aligned (eg. the "Katmai" issue, which I guess is their dissatisfaction that NT4.0 will not be rev'd to further exploit Katmai instructions), and "early initiatives" dividing rather than uniting us. I think that if they want to propose that having good bonding between Andy/Barret/Billg/Steveb to help iron out any inevitable bumps (eg. our roadmaps are never going to be perfectly aligned), then this is good discussion to have.
- I told Pat that particularly if Steveb comes, Billg/Steveb may raise the issue that we have never been able to effectively cooperate on marketing. We used to think this was because Dennis Carter blocked it, but with Dennis gone, are there other issues, do they have different PoV?
- I think it would be interesting to hear Andy's current view on the whole non-PC, appliance, TV, cable space. They have decided to continue StrongARM, How are they interacting with cable world, etc.

-----Original Message-----

**From:** Bill Gates  
**Sent:** Friday, August 07, 1998 7:38 AM  
**To:** Carl Stork (Exchange); Jim Allchin (Exchange); Paul Maritz; Bob Muglia (Exchange); Joachim Kempin  
**Cc:** Marshall Brumer; Eric Rudder  
**Subject:** Intel

I have a meeting which is just me and Andy and Craig Barrett a week from Monday.

I am very interested to get your thoughts on Intel and any suggestions of what I should be discussing during the meeting.

Jim has already suggested I talk about IP issues.

-----Original Message-----

From: Jim Alchin (Exchange)  
Sent: Tuesday, August 04, 1998 9:22 AM  
To: Paul Meritz; Bill Gates  
Subject: Intel and IP

We had a good review with Intel yesterday on trying to align our roadmaps better. We discussed Intel's product roadmap and the features they would like to see in the OS to align with that. It was a positive meeting. Katmai support for NT4 was discussed and we explained the issues with supporting FXSAVE and FXRSTOR. Pat finally understood and agreed. However, we did agree to try and put some of the Non-SIMD performance optimizations in SP4 for NT4 which would give Intel (and us) some air cover for saying there was a benefit to have a Katmai enabled chip running under NT 4. One optimization (e.g., TCP/IP checksum) showed about 8% performance gain for SpecWeb.

Pat thought the work we were doing on Willamette multi-threading, etc. demonstrated excellent work. We have a number of changes in NT5 now for this system. After we have some silicon we may add more. As I said... it was a good meeting.

The purpose of this message really wasn't about updating you on this. It is about the constant problem we have with Intel over IP. It has reached an intolerable level in my opinion. I strongly recommend that we devote effort to fix this problem at the most senior levels of Intel. For two companies that need to work together a lot, the delays of information flow are insane. For example, we (I personally) recommended that they spend time in hardware addressing some of the security issues we see (e.g., secure boot, secure id storage, better facilities for crypto, etc.). They didn't say anything to us for the longest time and all of a sudden they come back and they have something. But, we can't see the spec because of IP issues. We have all these complicated PSAs, etc. that supposedly deal with this, but they drag on forever. Each company is very paranoid and so opportunities just slip by. It is so complicated now that few people (maybe 3) inside of Microsoft really understand this stuff.

This one issue is dragging the possibility of a much better relationship with Intel down dramatically. I think Intel would agree. Unless we do something at the most senior levels though I don't see anything changing at Pat's level. I do not have the answer here, but I expect if we made this an critical issue to attack we could come up with something better than the situation today -- which is getting worse, not better.

jim