From: Brian Valentine

Sent: Saturday, February 02, 2002 11:45 PM

To: Mike Porter; Bill Gates

Cc: Jim Allchin; Ann Marie McLeod

Subject: RE: Intel's design engineers and Windows

We are all over them on this and will keep trying to get them to move. Attached is the whole thread that is currently running on this.

-----Original Message-----
From: Mike Porter
Sent: Thursday, January 31, 2002 12:34 PM
To: Bill Gates
Cc: Jim Allchin; Brian Valentine
Subject: RE: Intel's design engineers and Windows

Sorry it's taken so much time to investigate. BrianV put a team together to nail this and in our opinion we did everything possible and had a pretty solid solution. Intel said they felt we didn't meet every need, although I've been pushing for the list of "how we failed them" for over 2 weeks now. Bottom line, IMHO, Intel doesn't want to deal with their internal politics and "sell" this transition internally. Think about our development org. bright, extremely talented and opinionated folks... and at Intel, the developer crowd was raised on Unix/Linux. They just don't WANT to move. Also, this was originally being driven by Albert, and that changed to Gelsinger for a while I'm not sure given their recent changes internally who owns this. This may be an area that Otellini could help.

Given that you are meeting with Paul on the 14th of this month (and we have a prep meeting on the 6th), is there any data I can get you to aid in your discussion with Paul?
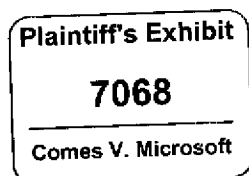
-----Original Message-----
From: Bill Gates
Sent: Monday, January 14, 2002 1:41 PM
To: Mike Porter
Cc: Jim Allchin; Brian Valentine
Subject: Intel's design engineers and Windows

Where are we on this Jihad?

Do I need to be calling and emailing Ottelini to get this back on track??

Every day that goes by is a bad one for us on this. Despite the difficulty we need to draw the line in the sand on this one for a lot of reasons.

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From: Brian Valentine

Sent: Saturday, February 02, 2002 5:23 PM

To: Srini Koppolu; S. Somasegar, Bill Veghte; Vinod Anantharaman, Doug Miller, Chris Ray; Eric Rudder; Ann Marie McLeod

Cc: Jim Allchin

Subject: RE: Intel EDA migration

Please make sure Ann Marie is on these threads -- I have added her here.

As far as going after them -- they are important from the perspective of getting Intel to dogfood Windows. This would be a big thing we could both talk about, etc We want to them on Windows We do need to look at the all the ISVs, etc and make sure that we have good programs in place to move them.

-----Original Message-----
From: Srini Koppolu
Sent: Saturday, February 02, 2002 6:46 AM
To: S. Somasegar; Bill Veghte; Vinod Anantharaman; Doug Miller; Chris Ray; Brian Valentine; Eric Rudder
Subject: RE: Intel EDA migration

It would have been worse if we haven't got the CAD ISV apps working on Windows. Atleast no one can make an argument that the Windows is not ready for high end apps

Let's engage with Intel for some more time and do some research on EDA space. But if it is a no go, we better cut our losses soon and not get into rat hole with Intel for months/years like in previous cases.

-----Original Message-----
From: S. Somasegar
Sent: Friday, February 01, 2002 4:35 PM
To: Bill Veghte; Vinod Anantharaman; Doug Miller; Chris Ray; Srini Koppolu; Brian Valentine; Eric Rudder
Subject: RE: Intel EDA migration

I agree on ROI, etc.
With Intel though, it is a crime that these guys are running Linux and it is a shame that we can't get them to move to Windows for their core development systems. I also think that unless it is a top-down initiative at Intel to "just make this happen", this will not get traction no matter how much we try.

-----Original Message-----
From: Bill Veghte
Sent: Friday, February 01, 2002 4:31 PM
To: Vinod Anantharaman; S. Somasegar; Doug Miller; Chris Ray; Srini Koppolu; Brian Valentine; Eric Rudder
Subject: RE: Intel EDA migration

Of all the different Unix migration targets, I am pretty skeptical that EDA is the most leveraged for us to go after where

Leveraged = (we can win with reasonable investment)+ (large economic return for MS relative to investment)+ (big credibility boost).

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I am much, much concerned about all the different corporate LOB apps on wall street, insurance, etc. those are the targets where we want to win and get the PR around.

-----Original Message-----
From: Vinod Anantharaman
Sent: Thursday, January 31, 2002 5:49 PM
To: S. Somasegar; Doug Miller; Chris Ray; Srini Koppolu; Brian Valentine; Bill Veghte
Subject: Intel EDA migration

Summary of a conf call Doug & I had with Intel today, re: migrating their ECAD / EDA environment from Linux/UNIX to Windows.

Background
- Intel President Paul Ottellini asked his team to work with MS, figure out what it took to move their EDA environment to Windows. Soma & Renee James at Intel had a recent discussion on this
- Intel ran a EDA migration project back in early 99, to move to NT4 – they got badly burned on this due to stability & software migration issues, and recommended going with Linux instead.
- MS got involved around mid 99, did a joint project where Intel evaluated Win2k + SFU vs. Linux, and a list of about 100 or so MS work-items were identified. In the end, after 18 months of engagement or so, this didn't pan out -- some of the reasons are listed in the first email attached above. Intel went ahead w/ the Linux route.

Attendees
- MS: DougMil, VinodA
- Intel: Greg Spirakis (VP, ECAD Design Tools), Elwood Coslett & Kevin Wheeler (program managers in Engg. Computing / IT), Mike Webb (don't have his designation, he facilitated this conf)

Meeting Summary
- Intel summarized their migration requirements thus:
  - Primary order bit is that **MS must convince the top EDA players to move over to Windows**. Intel firmly believes this is what it takes for them to consider moving to Windows. They were very crisp / up-front on this point.
  - They use about 100 odd tools from 8-10 different vendors, will share the list with us (will include the usual cast of characters: Cadence, Synopsis, Unigraphics, . .)
  - Additionally, there's a big ecosystem of tools & scripts they've developed around the major ISV apps, so all of these things have to be migrated as well. Once the ISV apps become available on Windows, they would need to find resources for the Windows migration, and as they said "take the risk associated with such a switch-over"
- Intel's perspective on what's changed since we last engaged with them:
  - EDA ISVs got burnt with poor experiences with Windows NT, are wary of taking steps in this direction
  - ISVs have been able to move to Linux easily – ported their code more easily, able to share code b/w UNIX / Linux, interop story is good. So they've been able to get cost benefits of IA hw w/ Linux as a viable alternative OS
  - Chicken & egg problem that ISVs still see no customer demand for Windows versions
  - ISVs are trying to reduce the total # of platforms they support --

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cuts their R&D, support etc. costs. Ideal scenario for them is that UNIX disappears and they support only Linux.
- Intel's perspective on what's <u>not changed</u> since the last time
  - Continued need for interop (b/w UNIX and Windows, in our case)
  - Continued need for stability of environment, OS, shell environment, scripts, etc.
- Linux apparently meets over 90% of their current EDA needs. They indicated a few aspects where Windows does better (but qualified these as being "less critical" requirements)
  - Intel developers prefer using Windows / VS as their dev environment for all their ANSI C, C++ apps
  - IT would prefer to support a single OS platform, and they clearly need their Windows desktops
  - Better integration with Windows desktop / Office, although they said they are able to do this OK with their current X based solution
- When asked to put themselves in our shoes, here's what they said they'd do (nothing earth shattering here...)
  - Find a unique value prop that will convince EDA ISVs about the advantage of supporting Windows & .NET. They said they're happy to help us with develop this, since they're familiar with the terrain.
  - Point out MS successes in related spaces like mechanical CAD etc. & how we created value in those ecosystems

Next Steps
- We'll get the list of key EDA ISVs that Intel depends on
- We'll get feedback from Intel & their customers on Windows-UNIX interop issues, feature ideas, etc (some of their customers mentioned some issues here, note that Intel is currently on the SFU 3.0 beta program)
- In light of Intel's position wrt to EDA ISVs, the right folks at MS (EPG?) should revisit the issue of whether we want to go after that business again Clearly this is a long term / uphill battle, if we want to go after it. I've attached a second mail thread where this topic was raised in March 2001, no decision was made back then to pursue this market aggressively. There was also an associated PPT Chris Ray and co. put together regarding the EDA space, I'm happy to fwd to anybody who's interested.

- Vinod

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