MY NOTES FR: 11/7/95 MTG

PM = PAUL MARITZ COMMENTS

Additional Feedback Session:

External Work:
Design Preview, review, workshop, testing
What is internal development work?

- Vision, concept created and delivered to team
- Get tech leads together and break apart divide resources to accomplish tasks
- Design preview feedback delivered back to team (from marshall's group)
  - on-going feedback mechanism to "feature teams" throughout design cycle
- Co-dependencies are identified and worked
- Majority of functioning is very unstructured
  - SIPC Feature Teams: MM, Comm, Internet
- PSD primarily structured around SIPC
- Kernel is it's own feature team
- David Cole - Kernel, PC Platform, Comm
- John Ludwig - MM,
- Cross Feature Team bridging is key area of MS work - trying to find better way to engage Intel and market
- CS: Structure is in-place to have each feature-team do well (independent) - theme/mission for CS is find ways to make [illegible] cross feature team issues get highlighted and resolved

CK: Common-driver model:
- Does all development report into CS?
- CS: yes. Ultimate goal is to have one team support any particular issue
- Two driver model will coexist for some period of tmie. Eventually NTIO will replace
- CS: Infrastructure in-place to run both driver models now. Trying to get (?) in place by DS 2.0 (ref mini-port driver.)
  - Direct-X API goal is to provide base for HW developers. If they need specifics, they go implement below it
- Sync-up of IHV messages:
  - CS: DS sits on-top of UDM. Teams trying to decide now whether everything should run under UDM - trying to resolve ASAP.
  - Team trying to understand implications of supporting ....

CK: The point we want to get to is to have Intel provide/debate issues facing feature team
DC: Likes idea and would like to engage
MS: Would like to get prioritized list of issues Intel wants to address (need to include when)
CK: Would like to include feature-team members in IAL technology investments

MB: SIPC opened MS eyes to need to work closely with HW vendors/IHVs. Continuing to pt resources behind suncing-up HW and SW development in order to provide better solution to market
CK: Need to figure out when (what time) is best to engage in various areas
MB: Charter is to continue expanding Intel interaction within MS campus. Need to find way to do the same with IAL
CK: IAL is different than other product groups. Need to engage earlier
MB: Timeline: OPSD →PCD →MPG. IAL falls between MPG and PCD

Discussion re: respecting confidentiality and HW/SW development efforts. CS: Doesn't know if we will be able to change. MB: Let go into it with eyes open - even if we can't change it (or won't)

CS: Support costs are roughly equivalent to development costs in PSD
CS: MS does not want to release SW until thoroughly tested on HW
CK: USB example: If MS and Intel agree, we engage MS earlier so they can begin development work early so that when we have HW we can drop directly into HW

MS CID 00124
Intel Confidential

CPDM - Cross Platform Driver Model = UDM

Gates FB Session:
Maritz, Gates, Stork, Brumer, Cole, Holzhammer, Kinnie, Ehrig, Barck

CK: Wants to spend fair amount of time addressing way we approach issues - this has lead to majority of inter company problems. Then we will address specific details

** Major message: We are totally aligned. No differences whatsoever

CK: Contrasting MS mission statement to ICGs
Mission:

- ICG: accelerate wide deployment of hi-perf PCs
- IAL: Enable and establish....to fuel Intel's processor roadmap
- PAL: Identify and remove platform limiters to processor ramp

- Bill not paying much attention. Reading another memo...
- Craig addressed market timing issues: lots of posturing around no one is right/wrong
  - MS timeline from start to finish in ~12 months
  - Intel timeline is ~36 months
- BG: MS operates very architecturally. Recent mtg with ProShare group looked like there is no architecture. PII references make it look like we are very architectural. Which Intel should we look at?
- CK: Now one....CG. Moot point
- Personal Conf surfaced many issues: Audio esp. real-time services. Going towards "Could collision have been avoided if we had started engaging earlier?"
- Stork pointed out "inaccuracies in USB timeline (rev .6 vs .7) Reinterated USB engagement request that they could not have done it better or faster.
- CK: Chicken and egg. HW Dev need beta code to build, test, etc
- BG: Legal issues. Intel IP issues continuously gate our engagement. Is it possible for MS to do UDM driver stacks and Intel do NT and Win9X specifics?
- Results in time-delay between Intel release and MS release and inconsistent product/message to market
- CK: Great area for Intel and MS to work together. Would like to get MS engineers in-place at Intel on specific issues to address realtime
- BG: Communication has been common problem resulting in this. USB is good example of us working together.
- CS: Intel found out about MS realtime investment and started IASPOX development and hid from Intel
- CK: 700 engineers running around industry confusing industry.
- BG: OK AS LONG as MS knows about them
- BG: Start a forum to provide MS with Intel's Top 5 issues to address/resolve (this meeting for now)
- CK: MS just bought Mlue Ribbon - why when we are willing to give them ours? BG wants to know why also!
- Acquisitions to catch-up result in delay (ref Rendermorphics)
- BG: Issue over Intel supposedly in "applications business" - MS is "in apps biz" has been for 20 years
- CK: disclosed Surfboard/Schroeder, POTS VC, TV VBI on PC, Teladdin, DSVD modem, HHD (Home Help Desk). Goal is to give OEM something to include in PC to provide EU better experience with
- BG: Intel wants to push — a very good thing.
- CK: MS doesn't seem to push for new market capabilities
- BG: MS Research is THE ONE creating MIPS-sucking apps
- BG: We need to tell MS to do some specific items where we need HW push. MS cannot do the all, however they may do some

Intel Confidential

-
- CK: MS stance is reactive vs Intel proactive
- NSPRP gone - along with it all non-Intel references
- NBTP is only agreed upon Intel/MS convergent technologies
- BG: Improving EU experience is contradictory to Intel approach to require increased memory
- BG: Add to list of diff. $500M a year logging calls. PC is worst experience of any appliance for EU
- BG: Concept of Bill Moss: Is PC going to die? By too much add-on HW, memory, peripherals, etc (ref PNP config util on Win3.1 – cost MS $10-20M)
- DC: Doesn't hear anything about Intel focusing on quality of experience....CK: PnP, USB, etc BG: Views NA as having more negatives than positives
- PM: MS worried about Intel's goals to accelerate HW obstructing the quality imperative. We need to put this first and foremost in order to succeed.
- 3DR:
  - Intel wants mulitple libraries sitting-on DDI
  - MS views core stack as very critical to hold control over
- BG: Today's API is tomorrow's DDI. Would rather not allow others to promote API
- MB: Issue is: Does 3DR disappear after we sync-up or does it proliferate to other OEMs as "defined API" that continues to be used over coming years? Don't want to create 2 paths for HW vendors to have to pursue and support
- BG: If Intel can clearly state what we want from
- BG: Graphics is the single greatest area that MS
- PM: Talisman major area of innovation for MS. Lots of work going on. if we can get over [illegible] issues, they will release.
  - AR MB and GH: Need clear articulation of what Intel will do with DDI and future of implementations
- PM: Agreed to release RL DDI under gentlemen's agreement that we pull-out of 3DR assuming RL meets Intel desired requirements
- "NSP" represents a area of conflict between MS and Intel. Need to come-up with new name....MS proposal is HSP or HBP (Host Signal Processing or Host Based Processing). Carl wants something with scaleable in it
- CS: Hypothetical ?: Will there ever be a situation where MS and Intel mutually agree to delay market intro in order to bring better solution to market
- BG: Much talk about this. We need to have much better communication MS should give Intel benefit of the doubt.
- BG: Craig's comment of nationalization of driver model sounds like our MB strategy (vertical integration)
- PM: Feedback to CK bullett on UDM nationalization. Only way MS has found to give high quality Eu experience. CK: MS is too strict if all they can say is that people can only write to the register set – will make innovation slow/stall.
- CK: Wants MS to develop apps to drive new technologies. Ref USB (bad example): Wants MS to develop app to drive USB deployment - BG: Help me out...what? No solution....
- AR: MB coordinate next level of detail to SIPC. MS common agreement on need to deliver to Intel
- CK: Needs roadmap to sync-up efforts (AR: RB/MB)
- Craig delivered 5 points to work together on
- AR: MB fix Intel plug-in point for Quartz work
- AR: Follow-up on MIDI synth ($0 cost vs $0 cost) - MS will relook

---

Done

- BG: Timeline is a real issue: RTS could end-up in 2H96. USB will be earlier - hopefully Q1'96
- BG: on RTS - need to share detailed schedules so we can do analysis of whether it's worth waiting for (or if we still think we need to continue forward with our SPOX solution integrated in apps)
- BG: NA issue: If we take resources off of current work to do VxD (which MS will never love) would be a shame

- PM: Should treat issues as "sales call" and try to sell Intel on waiting for UDM

- CK: Disclosed Q296 release of NA ProShare release. Customers need on NT
- BG: Super valuable. Wants to sit down in 4 months with same group and review progress. Also to extent Intel can disclose software projects to MS, would be extremely helpful.
- G: VBI/Intercast is great stuff - they just wont endorse sftwr with 2 weeks notice

- Marshall areas: need to identify MS contact
- NA
- VBI - MM
- USB
- SW MIDI - MM
- DMI/RDMI
- 3D API and DDI
- RTS and RTMS
- DINO
- Legal Issues: Need to resolve IP concerns over sharing code and address patent rights
- DC: Good to understand reasoning behind Intel's motivations