
From: Craig Eisler (Exchange)
Sent: Sunday, November 01, 1998 8:15 PM
To: Anthony Bay (Exchange)
Subject: RE: Codec Development

sorry... I left this in my drafts folder... I'm retarded. let me know what you think?

I don't think we would have to have a fractured codec strategy. cpierry could take the external lead with codecs as long as the streaming team was involved in any relationships that involved streaming codec related deals - like qdesign or intel. I would be willing to be a client of Cris' work as part of an overall codec effort. like the WDM team is responsible for a new driver model, but they don't own all drivers - they define the architecture, and everyone works within that. I think codecs would work the same way. efforts to address things like mp3 and ac3 and mpeg2 would be separate efforts from low bitrate/high performance codecs.

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

From: Anthony Bay (Exchange)
Sent: Friday, October 30, 1998 6:32 PM
To: Craig Eisler (Exchange)
Subject: FW: Codec Development

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

From: David Cole
Sent: Friday, October 30, 1998 5:49 PM
To: Anthony Bay (Exchange)
Subject: RE: Codec Development

I am learning towards telling people the streaming codec effort/team needs to be in your team so you can compete, but I don't want us to revert back to a fractured codec effort. Who takes the lead on talking with Intel for example? We can't have 2 groups charging forward and confusing customers/partners. There will be a single person on the business development side, but that is not enough. Is it possible to have the streaming codec developers on craig's team but the external contacts and be cpierry/paulo. Would you/craig be willing to do that? Would that make sense, or is that hand cuffing you and craig? I don't know if cpierry would be willing to do that. hard to hold him accountable for our company codec strategy if he is splitting it.

I can't move all codec stuff to craig, I've just started unfragmenting things. please give me suggestions on how we'd manage this. confer with craig of course.

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

From: Anthony Bay (Exchange)
Sent: Friday, October 30, 1998 5:37 PM
To: David Cole
Subject: RE: Codec Development

i appreciate that you are sympathetic to my issues/concerns. as i said, i will do my best to be a lot more effective with you and your folks.

codecs are the only area where i have decided to be hard core.. i just can't see a way for us to focus on executing a streaming media strategy without codecs. i can see how the player runtime merges with IE and why you should own and drive that. i can see why LM going to office can be good thing. but codecs are so wrapped up in an end to end streaming solution, and that is where we will win or lose in next 18-24 months, that i just don't see how to do this without codecs.

this is the same logic i think bradsi used to pull the IE team together, outside core windows, until it had critical mass and success. i am not making a long term argument for where things should be organized, but a pragmatic one of empowering one team to win a key battle. i have to believe if brad were here he would just say anthony and eric go win this. solve the longer term architectural purity issues as you can, but focus on the top priority - which is winning against RN.

i have been told that winning against RN is something i need to own and be accountable for. yet i spend more time

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hassling with internal infighting and attempts to drive independent paths than i do on the really important issues.

part of the reason i am pushing for moving the codec team back is that the age old problems between the two groups continues. i am so frustrated that i haven't been able to figure out how to get these groups to act more as one.. i really bent over backward to try this with eric. in this current case, paulo believed that cpierry owned codec strategy, cpierry hasn't involved us.. and the first time craige or i find out what is being proposed for codec strategy is in front of jimall. same for codec discussions with qdesign, intel, others. it is no fun being on the outside pushing to get in. we have a lot of expertise in this area but are not included in a lot of the ongoing thinking. in addition i have been unable to get cpierry to even tell me what specific plans are for changes in wmp in ie5.... how we are addressing the ask, tell, help issues for example.

my sense of this is that cpierry wants to have something he can own and drive, and that between he and kate the ericeng legacy continues to some degree. maybe i am the one really off base on this, but i have no agenda other than delivering what i have been asked to do.

i am fine if you want to keep the codec team together and have craige manage that. i am fine if you want to split the team up between a general use multimedia infrastructure and a kernel based infrastructure for codecs and streaming codec work. but i have a very hard time continuing with the status quo of two teams feeling like they need to own the problem and acting independently. it just makes life too complex. if winning against RN is the top multimedia priority right now, then lets empower a team to go do that.

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

From: David Cole
Sent: Friday, October 30, 1998 2:50 PM
To: Anthony Bay (Exchange)
Subject: RE: Codec Development

Your mail was good. I personally would not have brought up the jim directive thing, but that is more a style issue.

I'm interesting in hearing not-so-well thought out ideas at any point, I'm pretty good at reading email.

I am very sympathetic to the craige/abay view on streaming codecs. it's a competitive area so line up as much stuff as possible... I've also got a ton of mail in my inbox about how we must keep them all together so we can actually formulate and execute on a broad strategy, code sharing across these different codecs, evolving the model, etc, etc. They all say we must do this and execute with streaming as the top priority. Just so you understand the list of people telling me this; jaytor, cpierry, levi, paulo, wpoole, and of course ericeng.

Let me stew about this over the weekend. If you have any other arguments on how I we can accomplish the focus on streaming, and the focus on the broader codec issues, synergy, etc. please let me know. Could they physically live with the client team, but report to craig? I am mystified why you/craig aren't deeply involved in all the codec stuff anyway, even without them reporting to you. why doesn't paulo meet with you, why isn't craig talking with ming every day, etc, etc.

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

From: Anthony Bay (Exchange)
Sent: Friday, October 30, 1998 8:33 AM
To: David Cole
Subject: FW: Codec Development

as i said yesterday, i am committed to being more productive about things. next thing i owe you is overall streaming strategy. first cut will be a simple email covering key points.. i would like to be able to discuss with you as we evolve rather than just wait until we think we have the strategy done. eg... you will get some mix of well thought out and not so well thought out ideas.

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

From: Anthony Bay (Exchange)
Sent: Friday, October 30, 1998 8:31 AM
To: Jay Torborg; David Cole
Cc: Craig Eisler (Exchange); Deborah Black; Cristiano Pierry
Subject: RE: Codec Development

sigh. it doesn't seem like we are any closer to a solution.

we agreed that we wanted one team to be responsible for streaming media infrastructure. that is craige's team/me. they

aren't the netshow team or the server team they are supposed to be the streaming team. this is something jimall specifically has said he wants to happen. from this mail it sounds like that directive isn't clearly understood.

general use multimedia infrastructure such as dshow and a kernel based infrastructure for codecs should clearly be done by mm team. but that doesn't imply that all codec work should be done there any more than all driver work should be done by WDM team. i expect that of course there needs to be deep and close relationship between streaming team and core mm team.

there is also a distinction between support for standards like MPEG2 playback or H323 and fast moving non standardized areas such as internet streaming codecs where the defacto standards are being set by a competitor. we have to be careful not to see the codec problem as monolithic.. some codecs we develop ourselves and need to drive/compete with defacto standards. this is the important area. in other areas the standard is set, moves very slowly and the dev challenges are not huge... this discussion is really more about where ming's team, Qdesign and rapidly changing codec work would report. i don't see that all microsoft codec work has to live in one place, any more than all driver work has to live in one place. codec work done in the streaming team is no more or less restricted to other's use than is codec work done in core mm team.

if we are to be able to effectively compete in streaming area it requires an end to end focus; format, codecs, encoding, protocols, tools, dshow filters. we already know that we stumble over ourselves in current situation. we won't get a focused effort if we continue to split that up without clear ownership of the streaming deliverable and responding to RN - which is a very big platform threat to microsoft.

i agree that there are no perfect solutions, and that both alternatives have some tradeoffs. but i think given jim's desire to have a single team on point for competing in streaming, working closely with core mm team... that the logical place for the streaming codecs is with craig.

--- Original Message ---

From: Jay Torborg
Sent: Thursday, October 29, 1998 5:59 PM
To: David Cole; Anthony Bay (Exchange)
Cc: Craig Eisler (Exchange); Deborah Black; Cristiano Pierry
Subject: Codec Development

Cris and I met this morning to talk about codec development and organizational issues. We are both in agreement that codec development should be done in the audio and video teams at this point. As part of the reorg we envision for DebBI's org, we both agree that it makes sense for the audio team to be combined with the DirectShow team, resulting in a single org focused on streaming media infrastructure technologies for Windows.

In the short term, it would certainly be possible to simply wrap the existing codec technology from Q-design into a Dshow or ACM filter and make it work for our NetShow requirements. And, in fact, this is what we will do to get a solution to market quickly. But we believe this is short sighted and will not give us the long term advantages we need to succeed.

Building good support for codecs into our audio and video streaming technologies is a critical element of our strategy for the next couple years. This is not specific to NetShow or NetMeeting, although these products are clearly extremely important customers of this technology. But we also need to support codecs such as MPEG2, AC-3, MP3, etc. for DVD movies, digital television, high quality Internet audio, etc.

This is not to say that these other requirements should detract from our codec algorithm development for NetShow, but we need to insure that our codec plugin architecture can support all these requirements.

A key long term advantage is creating a kernel-based infrastructure for codecs and delivering implementations of our core codecs that are well integrated into this infrastructure. This will involve more than just wrapping the codec as a filter plug-in. Some of the key codecs need to be integrated into our WDM driver architecture so that we can evangelize IHVs to provide hardware support. This is an area we have a significant advantage in because of our relationship with these vendors.

We also believe there are significant advantages to be gained by integrating the codec algorithm with other signal processing functions. This is particularly true with full-duplex audio where algorithms for acoustic echo cancellation and compression can be combined to provide a lower latency solution for voice conferencing.

If codec development is an independent function outside of the core multimedia team, these benefits cannot be effectively realized. If past history is any indication, it is also likely that redundant development effort will result as the NetShow team addresses similar problems to the ones we will be forced to address for our general codec requirements.

Finally, we believe that we need to deliver these codecs as general Windows solutions, not specific to just NetShow or NetMeeting. While Cris and I fully appreciate the competitive struggle we are in wrt streaming media over the Internet, we need to be careful not to restrict our use of any of our codec technology for just this application.

Whatever you decide, Cris and I will do our best to support Microsoft's strategic efforts in streaming media.

Thanks,
Jay