Karl Neumann (LCA)

From: Jim Durkin
Sent: Sunday, March 02, 1997 6:29 PM
To: Blake Irving
Subject: FW: ActiveMovie & Netshow

And here is chucklehead's response...

-----Original Message----- --
From: Eric Engstrom
Sent: Sunday, March 02, 1997 5:18 PM
To: Jim Durkin
Subject: RE: ActiveMovie & Netshow

the term monolithic as applied to am is odd. i think we are a long way apart on this. we should both devote some serious time to this. what you propose here won't work for me. i would rather just have the two technologies continue to be desperate. i will go slow down prgressive networks for you.

From: Jim Durkin
Sent: Saturday, March 01, 1997 9:59 PM
To: Eric Engstrom
Subject: ActiveMovie & Netshow
Importance: High

I've spent quite a bit of time over the last few days discussing with my team what the right thing to do w.r.t. Active Movie and NetShow. This is particularly important in light of decisions you are making in the name of combatting Quicktime (like not licensing the Duck VCM), so I thought I'd take some time to put it down on paper.

I think for a variety of reasons, it's not likely that my team "gets out of the client business" anytime soon. I do think there's a lot we should do together, but first let me state what the reasons we believe we can't abandon our client activities are. If any of these are grossly mistaken, you should let me know.

1. The NetShow client has about ~80 properties that are not supported by the A.M. client Some of these properties have to do with network related things (being able to track error rates and loss rates on network-delivered media as well as handling multicast channels), some have to do with the fact that we stream lots of different types of media types and need properties to handle them. Either way, AM would need to pick these up or we'd lose functionality. Also, it's a treadmill-as we add more new features to Netshow, we add new properties.
2. The NetShow client is designed to deal with a network-based server. AM breaks down in several places (state machine, etc) where it has been built to assume media comes from a local device. The mail I sent you several months ago has the details of this in it.
3. NetShow absolutely needs to have clients that work on Win '95 GOLD, Win 3.1, mac, and unix (as well as a netscape plug-in). From what I understand, AM's target is not Win '95 gold (or won't be in the Memphis timeframe) and I don't think there is a cross platform story for AM any time soon. Meanwhile, we're just about in beta with all of our cross platform AND cross browser support and we're building our clients so they can be moved to other platforms more easily.
4. NetShow is designed for highly synched MIXED media. ActiveMovie does a good job at rendering audio and video, but my team's opinion is that because the filter model is very complex, it breaks down or is enormously difficult to do the things we do today with synching audio, video, jpeg, url, vbscript, jscript, etc. We estimate that it will take approximately 10 times the amount of code in the Active Movie model that we need today with our client and that because the AM model is radically different and more complex, we would leverage very little of the code we've got today in doing that work (so it would be a more or less start from scratch effort).
5. A side note to #4, AM v.1 required a lot of threads (nearly 1/filter—not sure if you've fixed this substantially for v.2). We are concerned that in addition to 10x the amount of code, doing streaming mixed media will be a thread-intensive activity. Because mixed media is actually a more realistic thing to do on a mediocre-powered machine (P75, etc), the thread overhead would kill us.
6. The ship schedule for NetShow is April and again in June. This gives us no time to make any move to AM.
7. I'm not sure having a single monolithic client for doing ActiveMovie type stuff (DVD, local playback, etc) and NetShow type stuff (networked mm) makes that much sense at the control level at least We're being pushed by our customers to make our OCX story SMALL and decomposed (different controls for audio, video, etc) so that

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they are minimal download hits for pages that don't need all of the overhead.

Regardless of this, I do think there are areas we can work on to make our short term story much better. Here's what they are:

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Short term

1. **Codec Story.** I DO think we can have a common codec story in the short term, but I think it needs to be a bit different than the one you are putting in place. I believe we can get NetShow v.2.1 to use AM filters ASSUMING all of the work on the Tiger client goes well (the work to get the Tiger client to use the AM MPEG filter-it is limping along right now. The good news is that this is a forked version of the NetShow client, as you know). I do think you should lend us Robin Speed to help us do this work and then leverage it for the NetShow v.2.1 client with IE 4.

2. **Codec Evangelism.** I have no problem telling any third party that our strategic direction is AM filters. That is what the NetShow team says today. However, I think we still need to be LICENSING VCM's and ACM's. Like it or not, ACM's and VCM's WORK on Win 3.1 and Win '95 gold and with NetShow and Netmeeting V1 and V2. It would be shooting ourselves in the foot not to license them given the customers we're trying to sell to in corporations. I think there is a difference between what you evangelize and what you license. We evangelize Windows, but we license Mac code all of the time to round out our story. This is why I think it's a mistake to only license the Duck AM filter and not also get the Duck VCM. It means we hose NetShow/Netmeeting and all previous versions of Windows. You don't need to put the VCM in the press release, but we should get it.

3. **File Format Story.** I think we need to do some short term work to make our ActiveMovie ASF story better at least for local playback of audio and video. We can do this by first getting the AM filter for ASF audio (between now and NS v.2) and then moving on to ASF video. Channing already offered to do the audio filter, we should give him access to source trees and assistance to make video work as well. This may not give us much of an ActiveMovie ASF story for NETWORKED streaming (per the above concerns) or interleaved MIXED MEDIA playback, but it will at least give us an ASF/AM local playback story and allow us to have an ASF story for things like background sounds in a page, etc. You guys should just treat ASF as another format you support for audio and video (like MPEG or AVI or MOV) in the short term.

4. **File Format Evangelism.** I read Cristiano Pierry's plan to "beat quicktime". It said that we'd be pushing AVI as the file format. I think this is a mistake. I think we BOTH need to be pushing ASF (just like we should both be pushing AM filters) with the tool vendors and ISV's. We've already licensed and gotten commitment from more tool vendors than those Cris targets in his plan. (we've licensed and commited Adobe, Assymmetrix, Vivo, Macromedia, Sonic Foundry, Vxtreme, etc). I think it needs to be pushed as both the local and networked file format for audio, video, and illustrated audio, even if only the NetShow client plays it in the short term.

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Long Term
1. **Rebuild ActiveMovie from the ground up.** Like I said the other day on the phone, I think the long term approach should be the one that Ralph, Mark, etc. have espoused: rebuild ActiveMovie as a set of straightforward COM-based interfaces for encode, decode, rendering, etc. If this was done, we would all be using ActiveMovie because it would be so damned useful.

2. **Scaleable network codec architecture added to ActiveMovie.** We need to design into AM v.3 a mechanism for easily plugging in scaleable networked codecs. This needs to be done for NetShow, NetMeeting, and virtually all of the streaming vendors and codec vendors. This is an area where we might actually get ahead of the curve if we could make a simple, easy to plug in interface for network streaming.

3. **ASF libraries and ASF v.2.** ASF itself needs to be extended to enable protocol independent streaming, better edit mode support, variable packet lengths, and other things. ASF should be both of our teams' long term direction for file format, regardless of the data type, or data location (local or network). I think it needs to be the file format of preference for storing Netmeeting meetings, NetShow live and on demand content, and local playback media. We need to converge on this.

4. **My team builds clients on ActiveMovie and cross platform/cross browser clients.** I'm not sure your guys are signing up to do this long term. If they were, we should discuss whether having the AM team do this too makes sense. Maybe it does.

5. Maybe it even makes sense to have a simple, unified NetShow/NetMeeting/Local playback client. I have concerns that that would be too monolithic and not easily downloaded, but it might make sense to have a simple client that does a subset of things in addition to more advanced clients.

I think the above is good plan that I'd like to share with cole and ludwig ASAP. We need to discuss this in any case.

jim

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