-----Original Message-----
From: Steven Fell [mailto:sfell@microsoft.com]
Sent: Wednesday, February 21, 2001 10:58 AM
To: 'sbanfield@real.com'
Subject: RE: Any update on the Secure Audio Path for WinXP?

Hi Steve - Been working hard to gather information on this and wanted to get back to you. I was able to collect some additional information on top of what you've cited below. As you noted, Secure Audio Path (SAP) isn't a "new thing" as it is already shipping in Windows Me. The Wired story that you've linked is full of inaccuracies, so don't take that as your basis for understanding the technology. SAP is a feature of Windows Media DRM technology in Windows Me, and in Windows XP. SAP is kernel-level software that can be enabled to secure the audio data path to prevent rogue device drivers from archiving uncompressed audio content. SAP provides a way for content providers to choose to require "trusted" sound card drivers (and sound cards) in order to render their DRM protected content. Requiring trusted devices ensures that all of the binaries in the kernel that in any way touch the audio data are signed as DRM compliant. Using this technology to protect content is completely discretionary; the content provider can select this option from the set of rules they're offered to protect their content with Windows Media Rights Manager v7. The process works such that, if the Content Provider chooses to require SAP as part of the DRM license, sound signals going into SAP are "noised" while "in-path" so if that content is somehow intercepted while in path, it would be silent or heard as "noise." If the binaries are certified, then the audio stream is "de-noised" in kernel mode and sent to the audio driver for rendering.

ISV players built on top of the Format SDK utilize the Format SDK for decryption (DRM) and for secure decode (codec) for hand-off to the Secure Audio Path sound-card driver Therefore, Real (or any ISV) can take full advantage of SAP functionality by licensing and building on top of the Windows Media Format SDK version 7 that your currently evaluating.

As you can see, Microsoft does not, as the Wired article suggests, always "check for SAP before passing the files on to any device " Nor is SAP "bundled" in Windows XP: It's a core part of the kernel.

Hopefully this answers most of your questions? If not, please let me know.
Additional technical details on this are documented in the Format SDK documentation

I'm currently looking through your IE follow-up questions and will get back to you on those

Hopefully you've been able to find time to enjoy this amazing weather. I assume the golf course is packed these days . .. We had all better get out and enjoy our summer while it lasts ....

-----Original Message-----
From: Steve Banfield [mailto:sbanfield@real.com]
Sent: Wednesday, February 14, 2001 4:09 PM
To: Steven Fell
Subject: RE: Any update on the Secure Audio Path for WinXP?

If I said that BillG demo'd this I'm sorry, but somebody told somebody about it.
We've been asked about a new feature in WinXP (and apparently WinME) that
will allow content to be secure from the player down through the driver and out to
the sound card. As we discussed on the phone, I imagine this is a new API or set
of APIs that all Windows apps will be able to use so that we can all protect our
content from being misdirected before it goes out the audio card.

So here's what we need to know...

a. What is this new thing? We think it's called "Secure Audio Path" and figured
since y'all were writing WinXP, you might. ;-)

b Is this a new API in the Win32 SDK?

c If not, is it in the WMF SDK?

d. If not, what SDK is it in?

e. How do we get technical information about this feature so our apps can take
advantage of it?

f. Is this something that is going to be broadly available to all Windows apps?

If it helps here's a 2/13/01 Wired story about it in which Gary Schare is quoted.

http://www.wired.com/news/technology/0,1282,41614,00.html

And a brief link to a paragraph in MSDN

http://msdn.microsoft.com/library/default.asp?URL=/library/psdk/wm_media/wmfo
rm/htm/understandingsecureaudiopath.htm

And I've also attached a slide that I guess one of our guys saw at a conference a
while back.

Any information you can give us would be very helpful.

Steve

    -----Original Message-----
    From: Steven Fell [mailto:sfell@microsoft.com]
    Sent: Wednesday, February 14, 2001 3:38 PM
    To: 'sbanfield@real.com'
    Subject: RE: Any update on the Secure Audio Path for WinXP?

    Looking into this Any additional details you can provide? What part of
    the demo did he mention this?? I watched over the web and didn't catch
    this.

        -----Original Message-----
        From: Steve Banfield [mailto:sbanfield@real.com]
        Sent: Wednesday, February 14, 2001 10:18 AM
        To: Steven Fell
        Subject: Any update on the Secure Audio Path for WinXP?

        Any information from the Windows team? Drop me a mail when
        you find out something.

        Thanks,

        Steve