PANEL SESSION: Unique Challenges To Enterprise Streaming

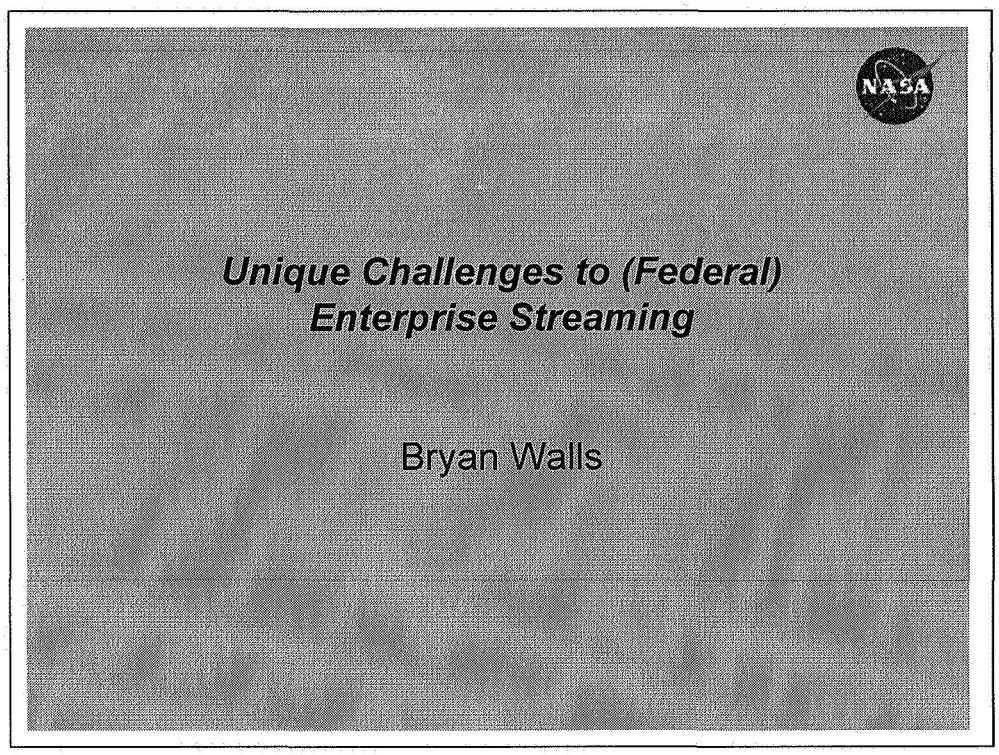
Today, more than 90% of Fortune 1000 companies use some form of live and on-demand streaming technology. Enterprise streaming is proving its value as a powerful, convenient, and affordable way to broaden learning opportunities, improve communications, and increase productivity. While the media highlights consumer streaming applications, streaming in the enterprise is where the serious adoption began and where the business value is tangible. This session explores strategies that are important to streaming in the corporate environment.

Speakers

- Moderator: Don Michels, VP, Technology, The Feedroom
- Bryan Walls, Streaming Audio and Video Interest Group Lead, NASA/Marshall Space Flight Center
- Maria DeMarco, Manager, Multimedia Solutions, The Vanguard Group
- Nicole McLane, Streaming Media Manager, JPMorganChase & CO.
- Rod Bacon, CEO, Media Publisher

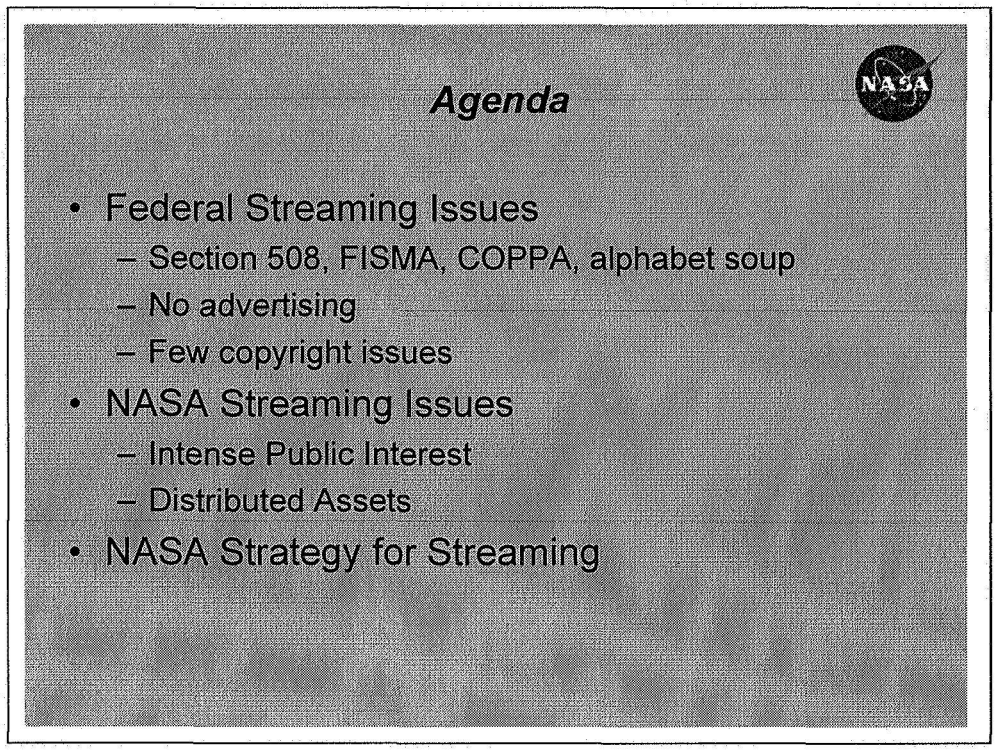
Track: Track A

Streaming Media East
New York, New York
Tuesday, May 23, 2006
4:15 PM - 5:00 PM

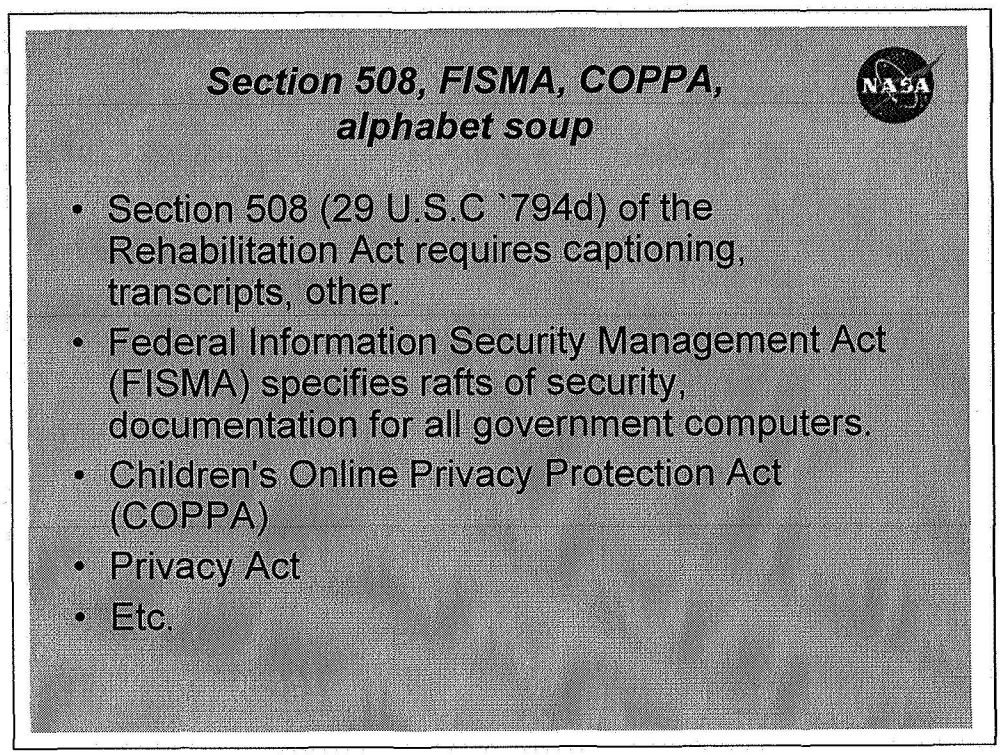


This is a 45 minute session, with four panelists. I had thought we each had time for a short presentation, but in fact I just received an email explaining that they prefer no slide or visuals. However, I'd like to have this pitch approved through export control, since it is what I plan to base my comments on, and I'd like it cleared through export control and all. The presentation will be recorded, and made available for streaming.

For my one-minute introduction, I'll briefly introduce myself, and tell them about my experience in streaming and podcasting, including heading the Streaming Audio and Video Interest Group (SAVIG), and Science@NASA.



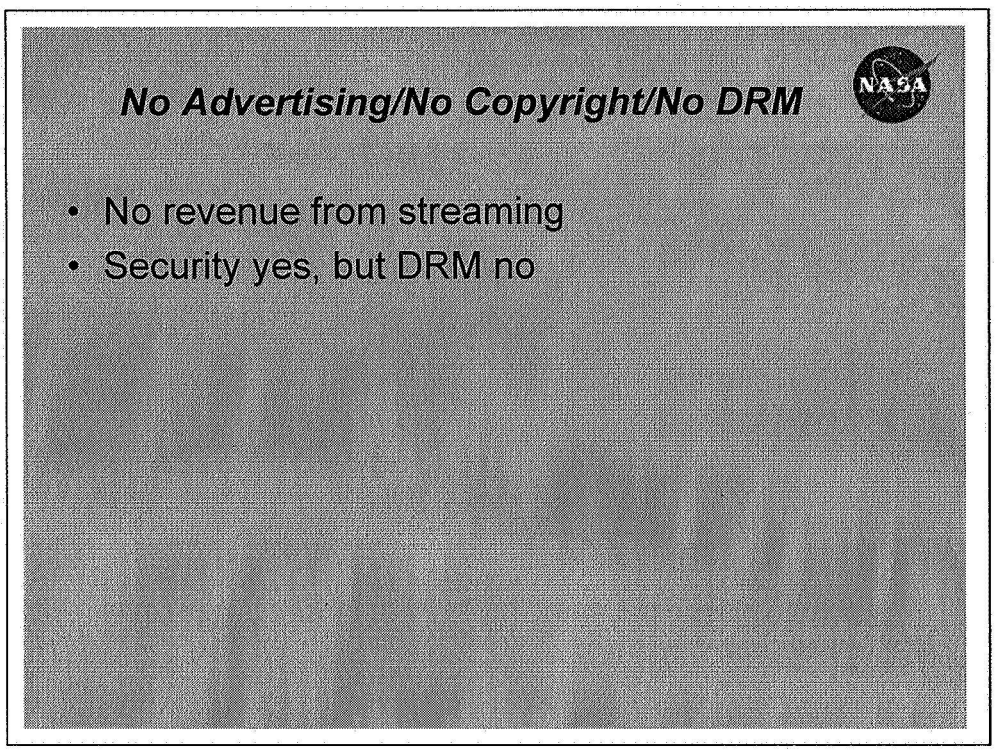
Enterprise streaming has different parameters than consumer streaming. The government enterprise has some differences on top of that. I'd like to highlight some issues shared by the Federal government as a whole, with a closer look at streaming within NASA. Then we'll look at NASA's strategy for streaming.



Section 508 of the US Rehabilitation Act decrees accessibility for content, and has a huge impact on streaming in the Federal space.

All streamed video must have synchronized captioning available. Likewise for video podcasts. All audio content must have a transcript available. This means that a very low cost, interview-style podcast is not an option for the government -- time and cost of transcription has to be figured in.

FISMA, COPPA, Privacy Act, and a large alphabet soup of other laws, regulations, and agency guidelines all add an overhead -- as much because of the documentation required to prove compliance, as the actual requirement to comply.



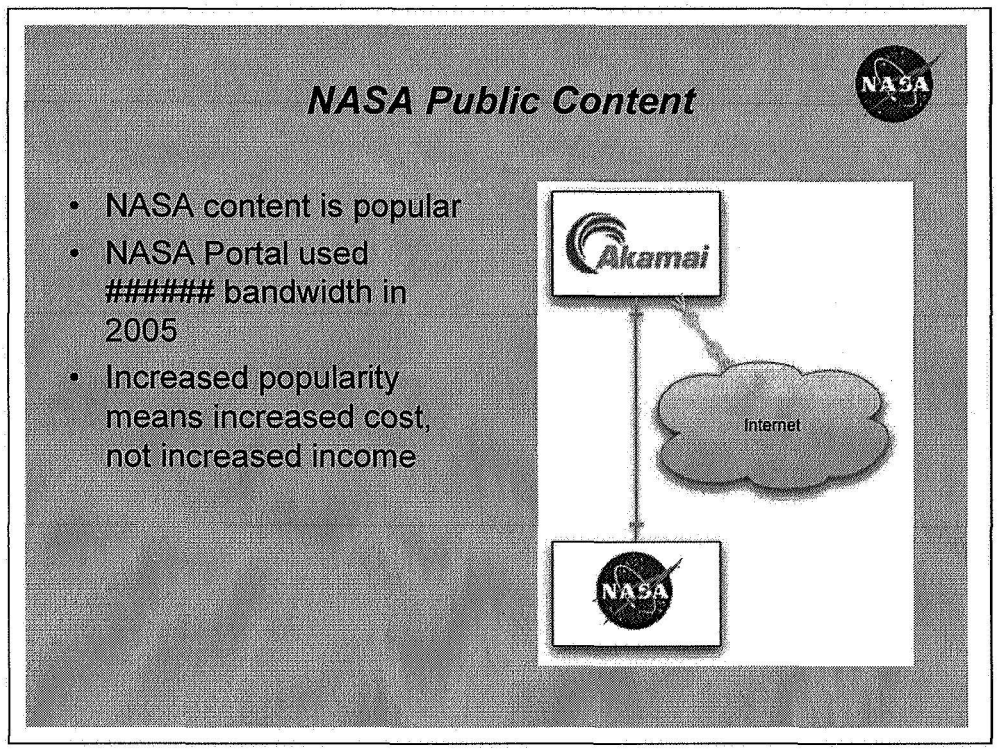
A major question in the consumer space is how to monetize content: subscription fee, cost per download, advertising, or something else.

There is no question here for Federal streamers. Money is allocated by congress, and streaming is a service provided through the funding.

We can't advertise, or receive funding by selling advertising.

A corollary is that extreme success drives up cost in a way that is not directly connected to the funding.

All available content is free to the public (unlike most music, for instance). Federal content is generally not copyrighted, and there is no significant concern about applying Digital Rights Management (DRM) to the content. This allows for delivery of content without the complication of DRM, and encourages using open standards.



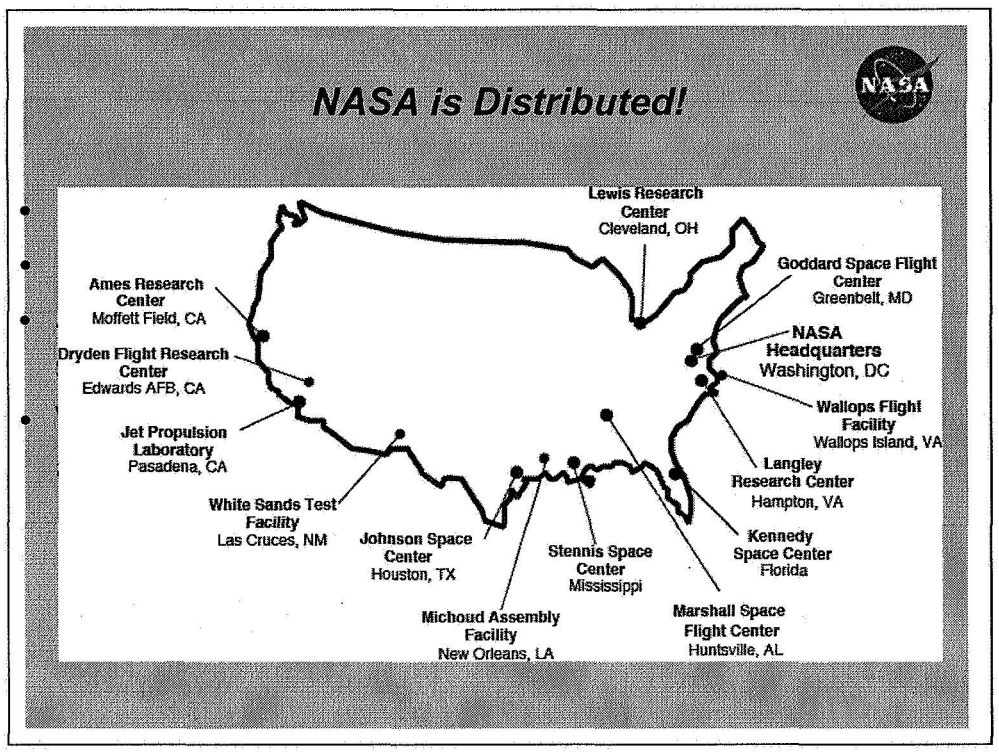
NASA has some special considerations beyond that of most Federal agencies. NASA content is extremely popular with a large segment of the public, both national and international. This is especially true during times of high activity: adventure and tragedy.

NASA has created a single, separate infrastructure for public outreach, called the OneNASA Portal. It came on line the day before the Columbia tragedy. When Spirit and Opportunity started exploring Mars, they brought in 6.53 billion hits.

For public streaming, NASA uses a commercial Content Delivery System (CDS), currently Akamai.

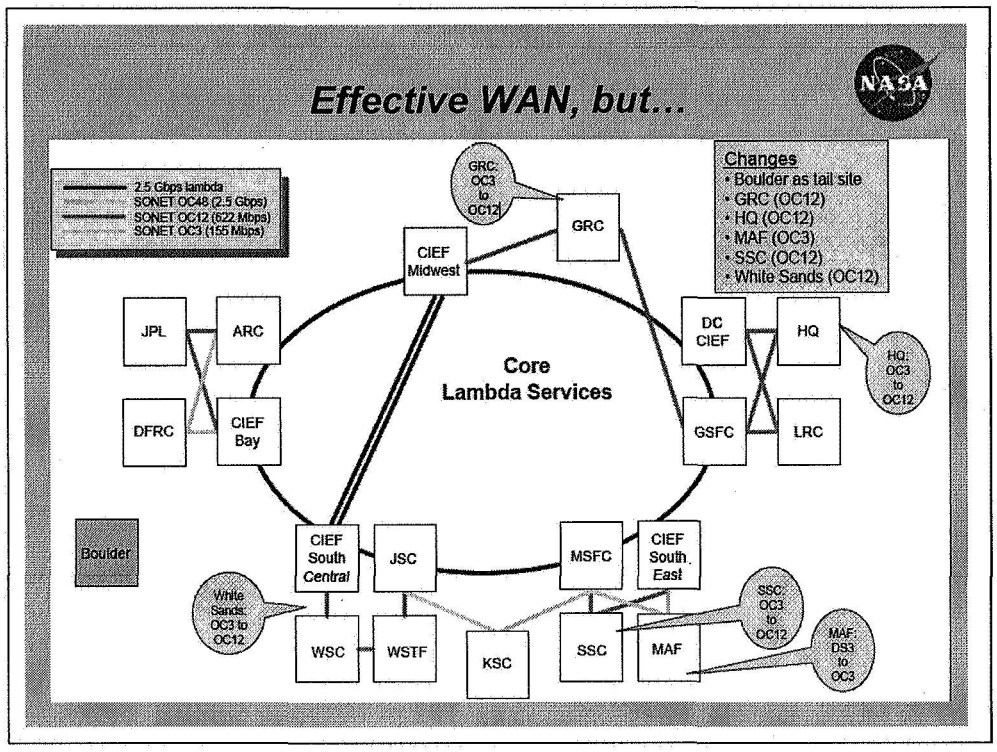
For the Return to Flight Launch last year, Yahoo also teamed with NASA to stream NASA TV, further distributing the load.

The architecture works well. Cost remains an issue. Contract specifies a certain bandwidth per month, with options to negotiate for special events.



Streaming within the NASA Enterprise is a different.

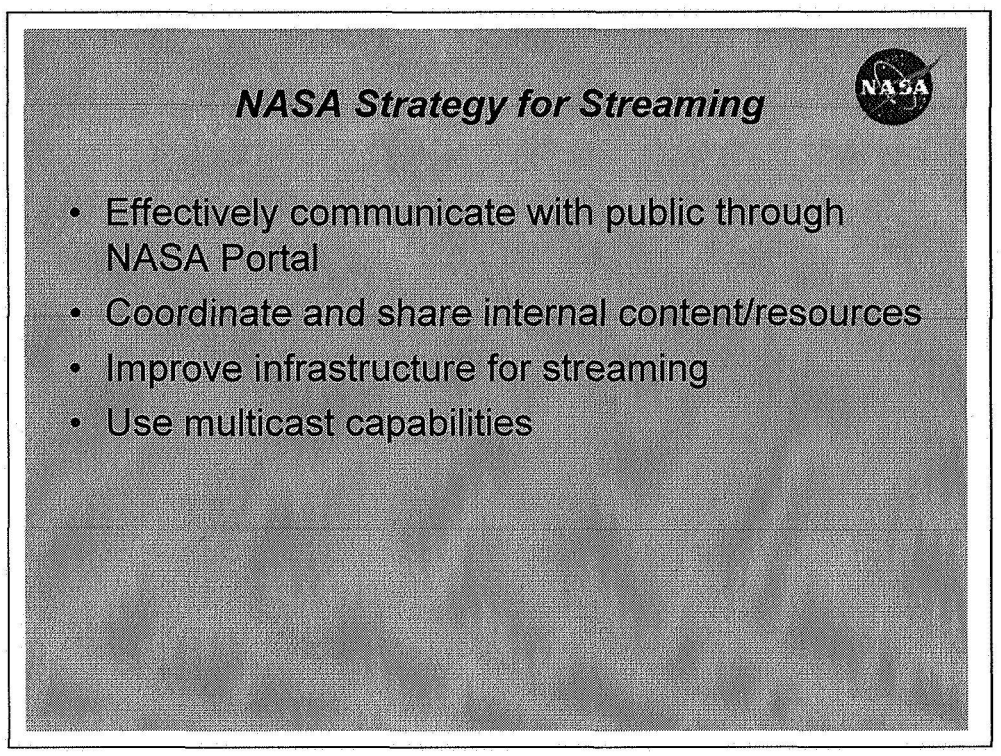
NASA is significantly distributed around the country. The various locations are very heterogeneous as to infrastructure, capability, and security approach.



NASA has a rather capable Wide Area Network (WAN), with significant bandwidth and multicast enabled.

However, differences at the endpoints have limited the ability to share streamed content beyond what is available to the public.

MSFC, for instance, has a multicast LAN with 100 MBPS to nearly all desktops, and uses Real Networks scalable muliticast for the most popular content. Other Centers use Windows Media, some have significant areas on 10 MBPS networks without multicast. QuickTime is out there, too.



The NASA strategy for streaming to the public through CDN and partnerships works well. An effort is under way to better standardize and clarify requirements for using the Portal structure.

The Streaming Audio and Video Interest Group (SAVIG) is working with the Office of the Chief Information Officer and the NASA Integrated Services Network to better coordinate and share resources throughout NASA.

Current sharing includes the DTV system, which provides four channels of broadcast quality video/audio to all Centers simultaneously, through a satellite uplink. Several Centers share content through splits on Real Helix servers. There are also various point-to-point links.

The hope in the near future is to leverage multicast over the WAN for better sharing, and provided distributed or proxy servers in the network to better spread traffic.