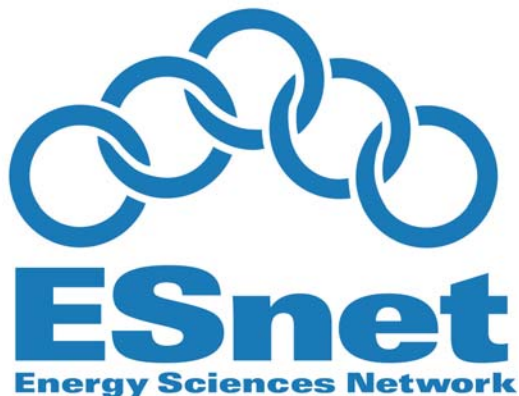# ESnet Collaboration Straw Plan 1 (2005 thru 2006)

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ESnet Workshop Day 1

- Missing scheduling
- Registration difficult in cut-over
- Filtering in GateKeeper
  - Usage constraints
  - Not just funding
- Guest access for H323
- H350 for management not security
- Constrained resources: DoS on MGC
- Software codec and endpoints
- Improve information dissemination

ESnet Workshop Day 1

- Cost ratio funding for people and infrastructure
- ESnet specifies and installs hardware
  - Testing and interoperability with all services (ESnet, VRVS, etc)
- Echo cancellation issues
- Integration: ESnet, VRVS, Access Grid, European NRENs, E-Sciences (UK), others…??
- Instant Messaging
  - presence
- Model- Chinese menu or Blue Plate only
  - Voice, Video, Data: active or passive

ESnet Workshop Day 1

- Archiving
  - long and short term
  - Privacy
  - Asynchronous content use
- Cascading- distributive model
- Room reservation:
  - Open Groupware
  - Exchange
  - Accord gone could investigate room scheduler solution with room coordinator notifications
- Computers in Conf Rooms
- VoIP

ESnet Workshop Day 2

- Volunteer list group
- Bridging SIP and H.323 directly on ESnet
- Windows messenger/IM
- Secret number: 200550
- Get/List user community needs in priority order
- End goal (who, what….etc) for each item
- Why is ESnet the right place to provide…
- Firewalls (solve how? information? best practices...other?)
- More/increase # of University collaborations

ESnet Workshop Day 2

- User feedback/approval of plan
  - find out exactly what is "needed" wanted
  - Move from there with collaborations.
- New ideas for vendor support
- Less dependant on commercial vendors
- Use open source
  - Databases, applications, data collab, control…etc.
- AG, Deb/LBL, and VRVS can be "vendors" of collaboration tools and applications
- Joint demos, developments, etc with above.
- Outreach….to Universities…or rather (?) inside DOE

ESnet Workshop Day 2

- Service level agreements, structure, service model changes based on funding levels…
- Outreach DOE HQ to help solve firewall issue !
- Peer relationships with Universities…
- NSF collaboration
- Guest escort
- PKI/CA
- MCU to MCU comm rather than GK/GK…call Brooks

ESnet Workshop Day 2

- 5 years out…top down approach…
  - $25 camera any one to everyone anytime full motion vid and great audio
- Video gaming?
- 3D cameras (Charles)
- Enable science…
- Allow researcher to plug into the tools they need…

Day 2 List of "CURRENT" Services Current Services (now-2 years?)

- List of Priorities (Distributed Model):
  - Bridging
    - H.323/H.320 (current)
    - Audio/data (current)
  - Scheduling ("current", Jan 2005 service)
  - Streaming (Dev now, planned 2004 service)
  - Instant Messaging (planned 2005 service)
  - Interoperability testing (current service)
  - Integrate VoIP (possible 2005 service multipoint via H.323 clients) into current services
  - Adv Development and Research
    - SIP, H.350, H.239, IM,….

Day 2 List of "Convergent" Services (0-2 years out)

- Converge with H.323/H.320/Audio/Data
  - AG
  - VRVS
  - Other
  - Shared desktop
  - SW based codecs
- Archiving (service)
  - voice, video, and data (persistence)
- Security (priority a need to understand)
  - Best practices for collaboration
  - Firewalls
  - Authentication
    - PKI/CA (service)
    - Active directory
  - Authorization
- Directory/Search/H.350 (service)
- Other?

List Day 3?

- Convergence (2 + ?)
  - H.323/H.320/AG/VRVS/Deb
    - VRVS—reflector(s) on ESnet
      - ESnet has the rack space, Philippe runs it.
    - AG—DOE venue server on ESnet
      - ESnet has the rack space, Ivan runs it.
    - Plan/Investigate Interop between H323/H320/AG/VRVS/Deb
  - Peering with outside organizations (VideNet, etc)
- Overall Vision and Long Term Plans
  - Provide technologies/apps that best benefit the community.
  - Structure (now)
    - How do we operate?
    - Funding/resources..
    - Who do we work with and how?
    - Users groups, RCWG, steering committee, etc
    - Yearly meeting/conference/workshop

Day 3 List (con't) ?

More

More

More

Day 2 Buckets

- Production "Current" Services (distributed)
  - Maint and support (level of support, etc)
    - Distributed or centralized?
  - 2 year and 5 year windows
  - Technologies/Paradigms
    - Change paradigms as needed
  - When ESnet will deploy, and what…
  - Level of support
    - distributed
    - ESnet handled
    - other
  - Staffing/Funding
  - Interop testing

Day 2 Buckets

- R&D/Advanced Development/Beta Testing
  - Investigate new technologies, test, develop, implement
  - Determine weaknesses in vendor products/apps
    - Work closely with them to get it fixed
    - Test
    - Repeat as needed
  - Bring/Showcase/Awareness new technology to community

Baseline

- Present the current plan for the next 2 years
- Use discussions to develop Straw Plan #2 for this afternoon

Overview

- ESnet Collaboration is run by 1.5 FTE
- We are <u>voice</u>, <u>video</u> and <u>data</u> collaboration
  - "Rich Media"
- We are moving towards more "on-demand" services and away from "reserved" ports.
- There is a trend towards the desktop and away from rooms.
- We will continue to provide "scheduling" where that means sending out emails to participants about the meetings.

Discussion

Overview (2)

- We are planning the following over the next few years:
  - Unifying voice, video, and data using Cisco/Latitude
  - Adding features to the Radvision H.323 Ad-Hoc bridges:
    - Multiple screen views
    - Transcoding
    - H.264

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Discussion

Overview (3)

- Add <u>capacity</u> to all services as usage demands
- Introduce Instant Messenger capability to start collaboration meetings (voice, video, and data)
- Look at recording meetings on user request
- Investigate very high quality videoconferencing
- Keep track of the latest technology…
  - SIP, H.264, H.350, H.239, etc.
- Other as ~~determined by you~~   Codian supports now!
- www.vide.net

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Overview (4)

- Look to work closer with Access Grid?
- Continue working with VRVS!
- Look at opening up ESnet access to the VideNet (Internet2) community?
  - We are a member, but, not activated due to security issues/concerns.
- Problem is: We are 1.5 FTE

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Discussion

Current Service and Support

- 8 AM to 5 PM PST

- Best Effort

- Workdays only

- Trouble via email to ecs-admin@es.net

  - No phone calls

Discussion

Bring Back Full Development (?)

- We are sharing what used to be our DEV systems to support production.

- Desire to have a full DEV to test on without impacting production

- Also, the DEV acts as a backup (note the Forgent issue)

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Discussion

Current Services Overview

- ESnet provides several services for ad-hoc users
  - 82X, 83X, 84x, 85x, 88x
- Different capabilities
- All services are accessible via the gateway for telephone users or ISDN video users. 510-883-7860

Current Services

- 82x, "Legacy"
  - Full screen
  - 128kbps – 384 kbps
  - CIF
  - H.261
  - 15 frames per second
  - Up to 70 ports

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Current Services (2)

- 83x, "Continuous Presence"
  - 4 Quad screen
  - 384 kbps
  - QCIF/CIF
  - H.261
  - 30 frames per second
  - Up to 30 ports

Current Services (3)

- 84x, "High Speed"
- Full screen
- 768 kbps
- CIF
- H.263
- 30 frames per second
- Up to 5 ports

Current Services (4)

- 85x, "Enhanced"
- Full screen
- 128 kbps – 384 kbps
- CIF
- H.263
- 30 frames per second
- Up to 30 ports

Current Services (5)

- 88x, "Streaming and H.323"
- Select screen from 5 choices
- Any bit rate
- CIF, QCIF and more
- Any codec
- Any frame rate
- Up to 40 ports H.323, 100 ports Stream
  - Quicktime or REAL

Discussion

Future Services

- 81X, "Unified Voice, Video, Data"
  - Audio, H.323, and Data Collaboration
  - Scheduled but not reserved
  - Email notifications sent to participants
- 88x, "Streaming and H.323" (Ready Now)
  - Transcoded H.323
  - Streaming via Quicktime or REAL
  - H.264 support
  - Individualized Display

Discussion

Upgrade/Maint Equipment

- Will let users know via ecs-info mail list as far in advance as possible of any upgrades or scheduled maint.

- Need the help of our users to test the more "exotic" endpoints (Gnomemeeting for example)

Discussion

Unify audio, data, video (2005)

- 1Q 2005 we plan to have the new Latitude/Cisco application in and operating.
- Email notification of meetings—stays
- The Forgent scheduler—gone.
- The centralized list of rooms—gone
- Reserving ports—gone
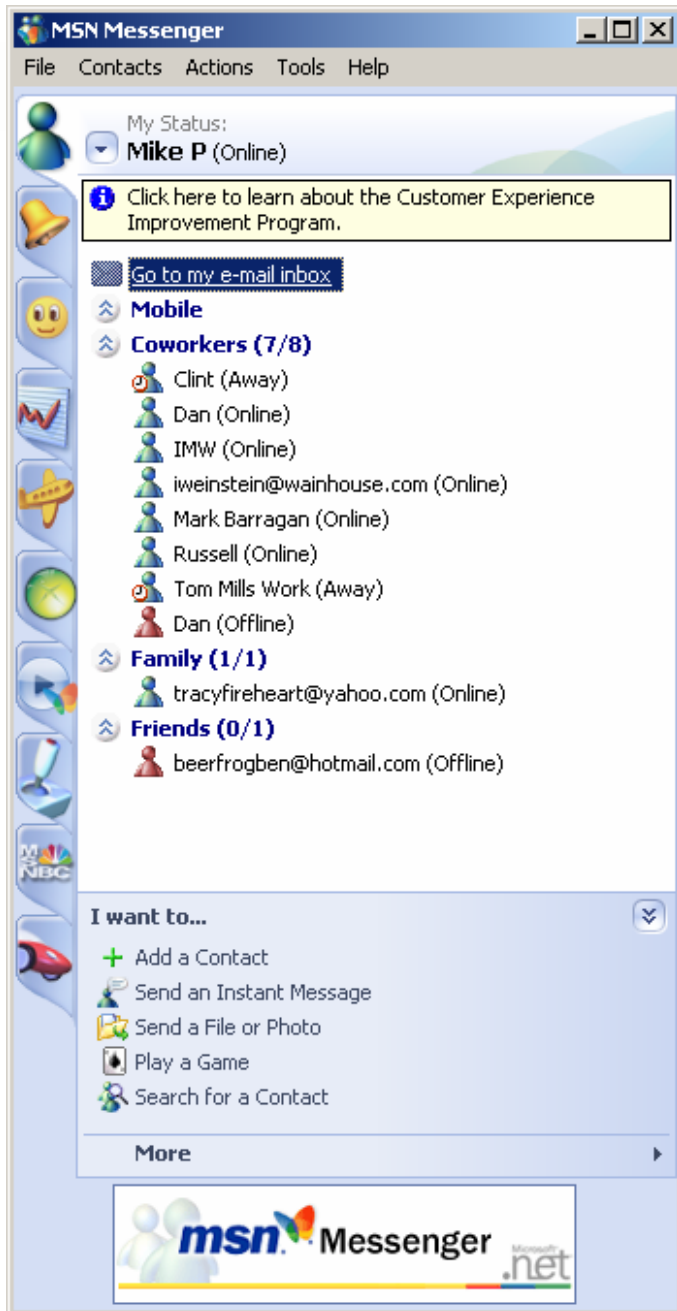- Home grown web and registration—TBD

VoIP Bridging (2005)

- With the Cisco/Latitude you can call into the "audiobridge" with your H.323 endpoint
- Dial 200550.

Discussion

Instant Messenger (Late 2005)

- Mid to Late 2005 we hope to have an Instant Messenger application for "instant" collaboration meetings just by clicking on your Buddy list.

- Open Source (?)

- Is this something you want?

Discussion

Recording of Meetings (??)

- New devices are available that allow recording and streaming of meetings on H.323.

- Records viewgraphs and other interactive data content.

- We will look at how this works and how content can be accessed via the web.

- The bigger issue is the legality of recording.

- Is this something you want?

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Discussion

Video-on-Demand (VOD) (2006-?)

- Access recorded and stored content easily via the web.

- Meetings, Courses, Experiments, etc.

Discussion

Very High Quality Video (2007-?)

- MPEG video at higher bit rates to give you the feeling of actually "being there".

- Is this desired? Needed?

Discussion

Distributed Bridges (2008-?)

- Look at distributing video MCU's throughout ESnet network to optimize access.

Discussion

Other?

- Tell us what you want!

Discussion