

# VVC meets EMC2

## Building blocks

Egon Verharen

SURFnet

[Egon.Verharen@surfnet.nl](mailto:Egon.Verharen@surfnet.nl)

[0031302305367](tel:0031302305367)

# VVC

Voice and Video real-time communication:

IP Telephony, Video Conferencing



CARNet Multimedia Center for CUC 2003 & TNC 2003 Conference - Microsoft Internet Explorer

TNC03&CUC2003 Multimedia Center

LIVE ARCHIVE SEARCH ARCHIVE Search query

ID	Lecture / paper	Author
01	Opening Plenary Session	Kim Veltman
02	Plenary Session 2: Network Challenges	Ian Foster et al.
03	Plenary Session 3: User Opportunities	Derek George Law

**TNC03 & CUC2003 Multimedia Center**  
Welcome to TNC03/CUC2003 conference Multimedia Center. Here you can find archive of sessions from the conference, with the list of sessions provided above. Please do note short instructions you can find in the window on the right, and verify whether your system will be able to provide you with optimal multimedia experience.

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TNC 2003 & CUC 2003  
User Opportunities / Network Challenges  
May 19-22, 2003, Zagreb, Croatia

PLAY STOP PAUSE SOUND ON

DOWNLOAD PRESENTATION STAND ALONE PLAYER

Video Services:  
On-demand, live, scheduled

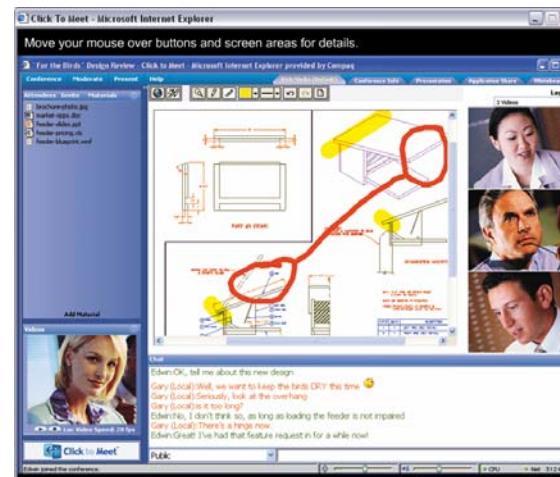
# Group communication on internet



	text	audio	video	data
synchronous	Instant Messaging, chat	<b>Voice over IP</b>	<b>Video conf.</b>	Desktop-sharing, Application-sharing
a-synchronous	E-mail, forum, Listserv, News	Voice-mail	Video-mail, <b>Streaming</b>	.ppt, .doc attachment

## Dataconferencing

- Document sharing
- shared whiteboard
- often proprietary



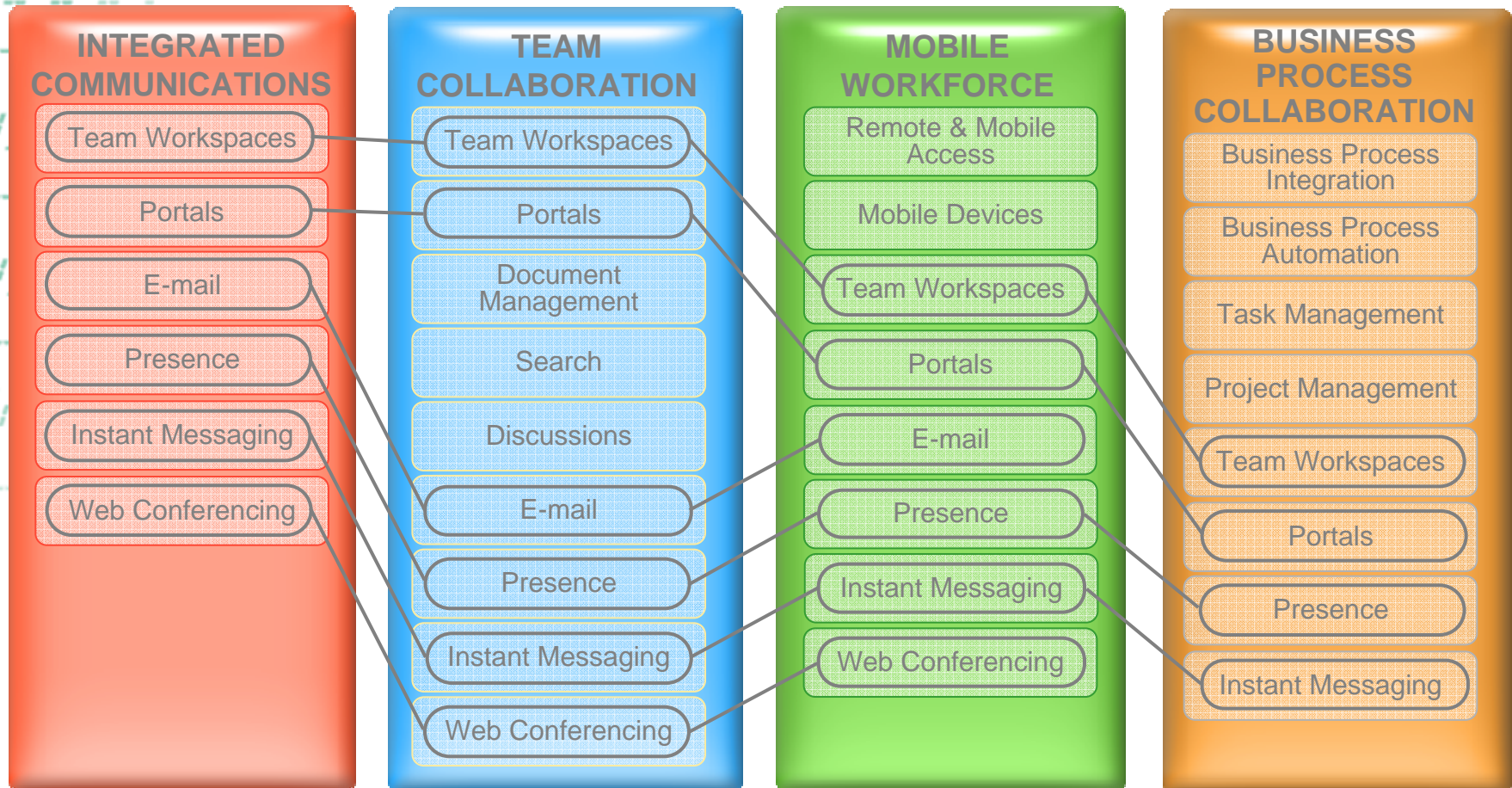
## Instant Messaging and Presence

- competing standards:  
Jabber vs SIMPLE

## Integration

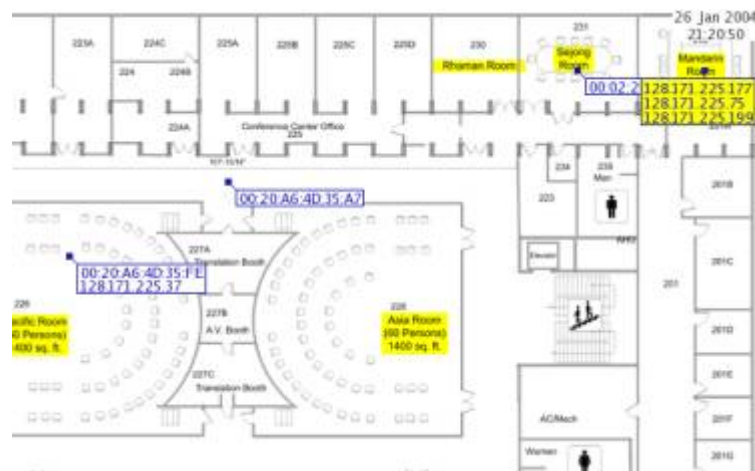
- Videoconference
- IM
- presence
- portal/learning environment

# Microsoft Collaboration



## And also

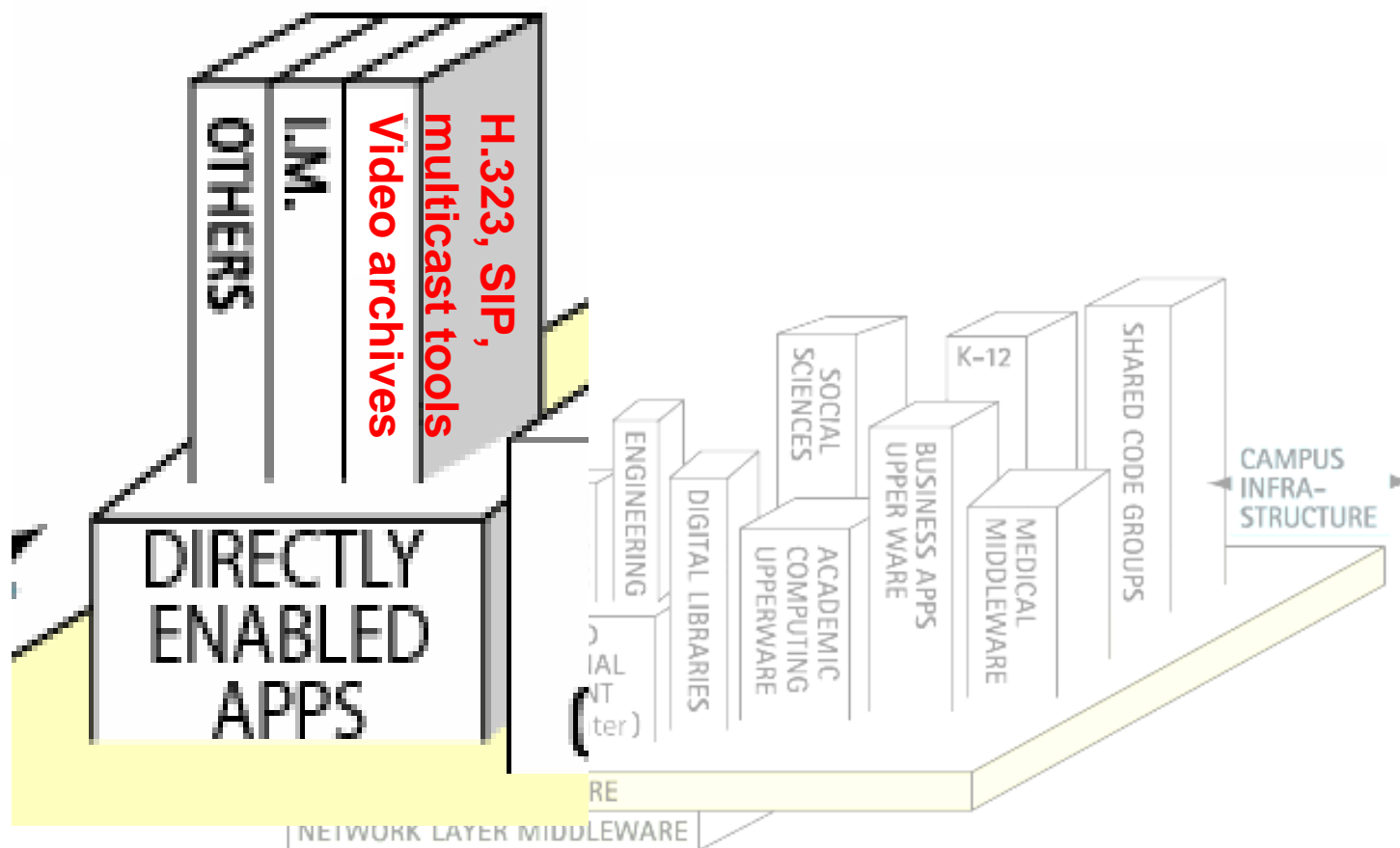
- Context aware and Location Based communication (see <http://pic.internet2.edu>)



- Extended reachability via database (H.350)
- Added security and anti-spam
- IPv6
- Virtual spaces. Meeting halls, really virtual café

## Building blocks

- Video middleware (a la Internet2's vidmid-vc)



## **“Room for Improvement...” VC applications today**

- No resource discovery – need to already know address of gatekeeper/proxy, target, gateway
- Non-existent or unreliable authentication (who is calling?)
- No authorization (all users have same access)
- No security (eavesdropping)

## Security Mechanisms in VVC

### H.323/H.235

- Annex D - Baseline Security Profile
  - Hop-by-hop processing
  - Password based security
- Annex E - Signature Security Profile
  - Certificate Based Security (PKI)

### SIP

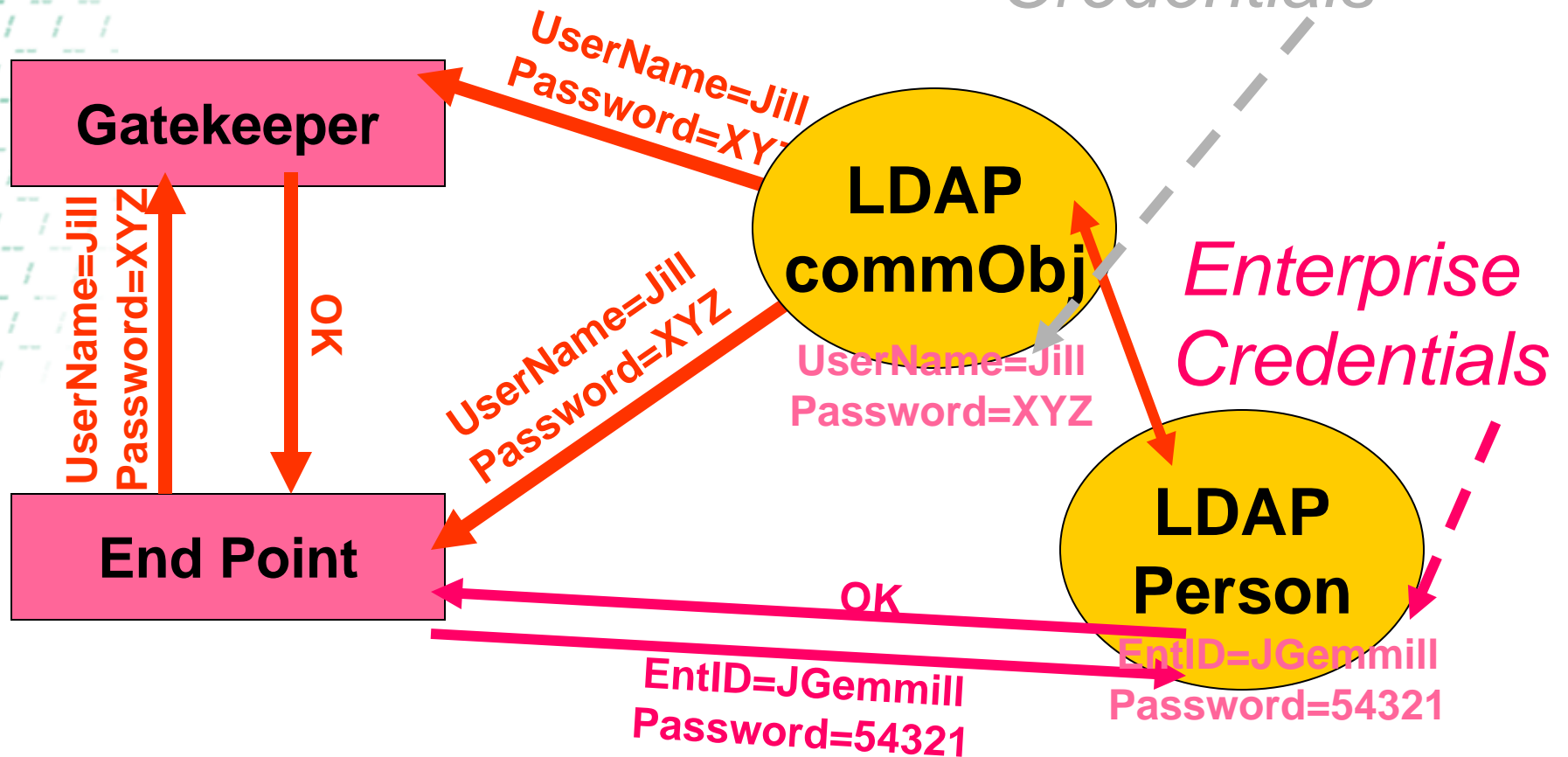
- End-to-end mechanisms
  - Basic authentication
  - Digest authentication
  - Message body encryption using S/MIME
- Hop-by-hop mechanisms
  - Transport Layer Security (TLS)
  - IP Security (IPSec)
  - The SIPS URI schema

## H.350 : New ITU-T Standard (August 2003)

- H.350 also known as commObject
- H.350 was born out of Internet2 Video Middleware working group “vidmid-vc” (Internet2 Middleware and ViDe joint initiative)  
<http://middleware.internet2.edu/video/>
- Project with NSF grant to UAB with partners CGU, SURFnet, UNC, and RADVISION
- Sent for informational review to IETF

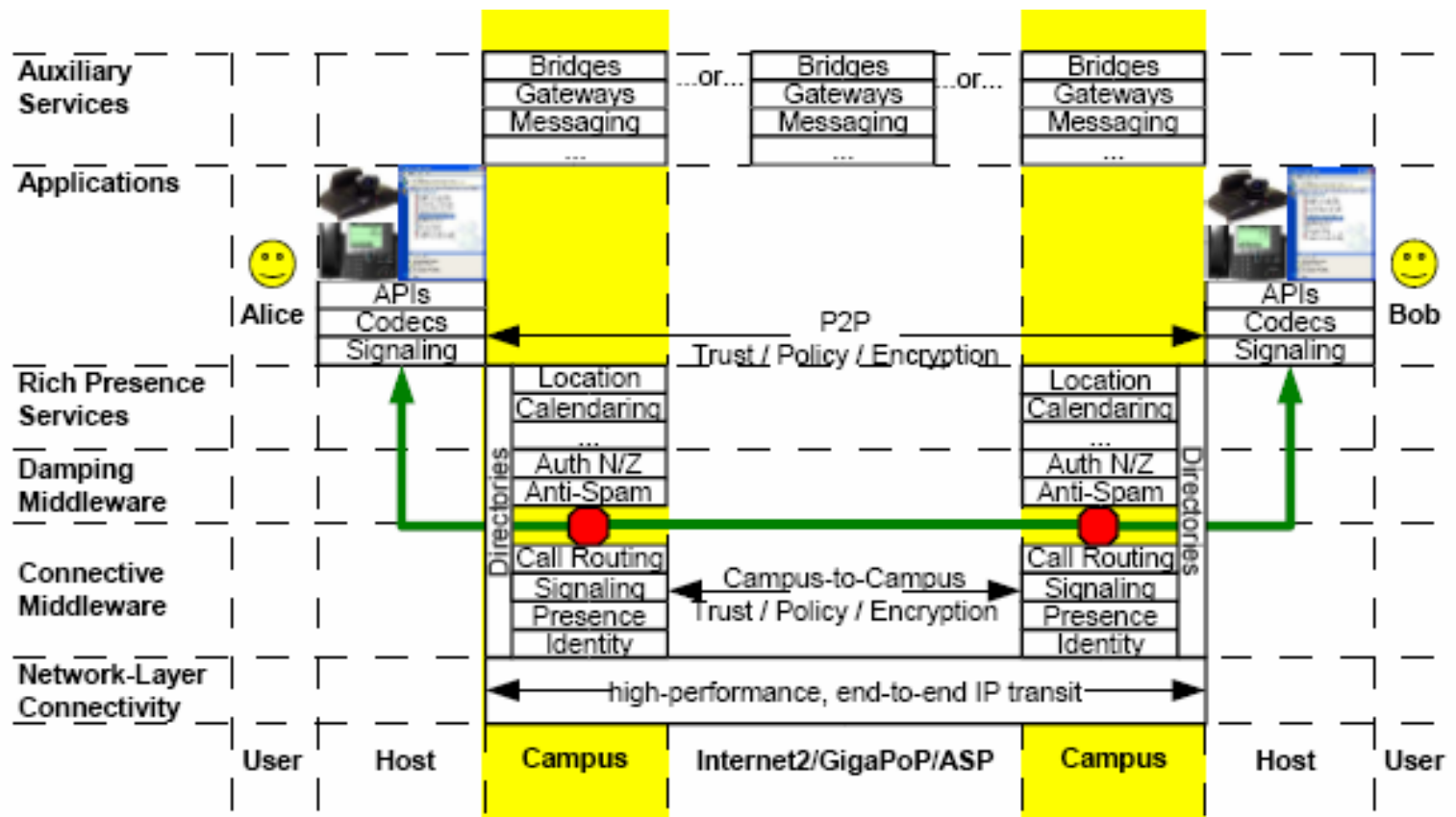
# Enterprise Authentication with CommObject

*Videoconferencing  
Credentials*

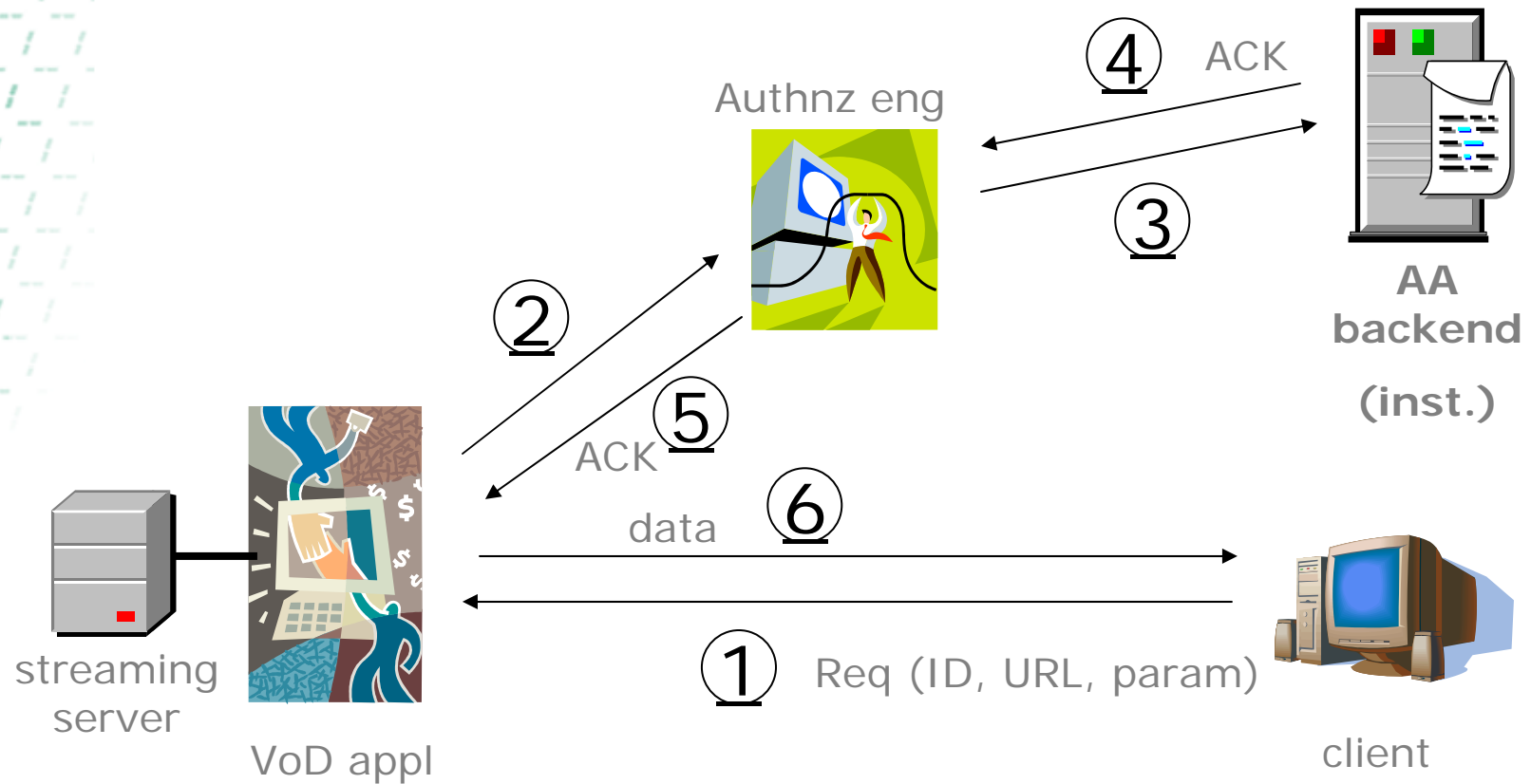


# Communication middleware

- Learn from “*Connective Middleware for Voice and Integrated Communications*” [Ben Teitelbaum, Internet2]



## Middleware for Video services (both live & on-demand)



# SVP2 mediafile protection

## Asset from Frans Ward

**Title:** NOVA (Uitz. 12-10-2002)

**Description:** Actualiteitsrubriek, gepresenteerd door Reinier van den Hout, met de volgende onderwerpen: 1. Amerika in de ban van de sluipschutter; 2. groeiende zorgen over leden Efraim-genootschap.||BG\_7557.mpg

**Section:** SURFnet

**Quota:** 9.742 megabytes free

**Path:** /surfnet/frans/

## Media files / Edit

**File name** BG\_7557.mpg

**Format** MPEG-1

**Server** kasenna

- Protection**
- Users from SURFnet connected organizations
  - Whole SURFnet network
  - User REALMS
  - No restrictions / External file

Realms

This media file is available to the following REALMS:

- @student.uu.nl - Studenten Universiteit Utrecht
- a2000.nl - Gebruikers van Chello in Amsterdam (Andy)
- egon.verharen@surfnet.nl - Egon Verharen
- linuxgoerae.com - Noterik BV HQs
- surfnet.nl - SURFnet gebruikers

Set all Clear all

Date of creation 2004-03-09 10:47:19

## Who does what

- V&V&C Integration – TF-VVC
- Security and Authnz – TF-EMC2
- Location-independence & -info – TF-Mobility
- Transport and Quality – TF-NGN

### FOCUS:

*Services* (still too technical)

If you build it, and support it, they will use it...

## TF-VVC Activity Areas

- A: Various guides relating to providing voice, video and data collaboration services
- B: Content Delivery Infrastructures for Video-on-Demand
- C: Content Access Portal
- D: Metadata
- E: Academic Netcasting Channel (Live Streaming Infrastructure)
- F: Global Dialing Scheme
- G: Integration of conferencing, streaming and data collaboration systems
- H: High-end/quality systems
- I: Usability - improving user interfaces
- J: Access control to video resources
- K: IP telephony deployments
- L: End-to-end measurements