

# Videokonferenzen heute



Dr. Ulrich Schwenn

Videokonferenz Gruppe  
Rechenzentrum Garching  
Max-Planck-Gesellschaft (MPG)  
& Max-Planck-Institut für Plasmaphysik (IPP)  
[schwenn@rzg.mpg.de](mailto:schwenn@rzg.mpg.de)

18. März 2010

# Übersicht

- VIKTAS-Tag Standorte
- Videokonferenzdienst im Wissenschaftsnetz DFNVC / VCC
- Telepresence
- Lösungen
- HD Hardware, Markt
- Unified Communication
- Infrastruktur

# Standorte

# VIKTAS-Tag 2010



Universität Duisburg-Essen  
Campus Duisburg

Gebäude LB  
Hörsaal LB 134

Lotharstraße 65  
47057 Duisburg



Humboldt-Universität zu Berlin  
Computer- und Medienservice

Vortragsraum im Erwin-Schrödinger-Zentrum

Rudower Chaussee 26  
12489 Berlin

MCU

  
**DFN** video conference  
 Deutsches  
 Forschungsnetz



MMZ Jena  
Aufzeichnung



SWITCH  
Serving Swiss Universities

Raum "Rigi"

Werdstrasse 2  
CH-8021 Zürich



Rechenzentrum  
der Max-Planck-Gesellschaft  
am Max-Planck-Institut für Plasmaphysik

Seminarraum D2

Boltzmannstraße 2  
85748 Garching

## VCC – 2009, Gisela Maiss

# DFNVC

## DFNVC: Dienstkomponenten



- **MCUs**
  - 3 Codian MCU 4520, Version 2.4
    - 120 Ports Video und 120 Ports Audio
- **Gatekeeper**
  - GnuGK, Version 2.2.7, Linux (mehrere)
- **Gateways**
  - 2 Codian Gateway GW 3210, Version 1.4
    - 1 E1 PRI (S2M), Calls: 5 (384) / 2 (768) / 30 (voice)
    - **ab Juli 2009 doppelte Kapazität auf GW in Berlin**
- **Recorder**
  - Codian IPVCR 2220, Version 2.2
    - 5 parallele Aufzeichnungen

## VCC – 2009, Gisela Maiss

# DFNVC

### Webconferencing: Adobe Connect (I)



- Produktauswahl: **Adobe Acrobat Connect**
- Pilotbetrieb seit 2,5 Jahren
- Stand 01.05.09:  
Registrierung von 174 Einrichtungen mit insgesamt  
1127 autorisierten Konferenzveranstaltern
- Server läuft stabil
- Positive Reaktion der Nutzer
- Inzwischen auch für Collaboration beim H.323-  
Dienst im Einsatz

# Neue Features auf der MCU

MCU Firmware 2.4.1.10, wesentliche Features:

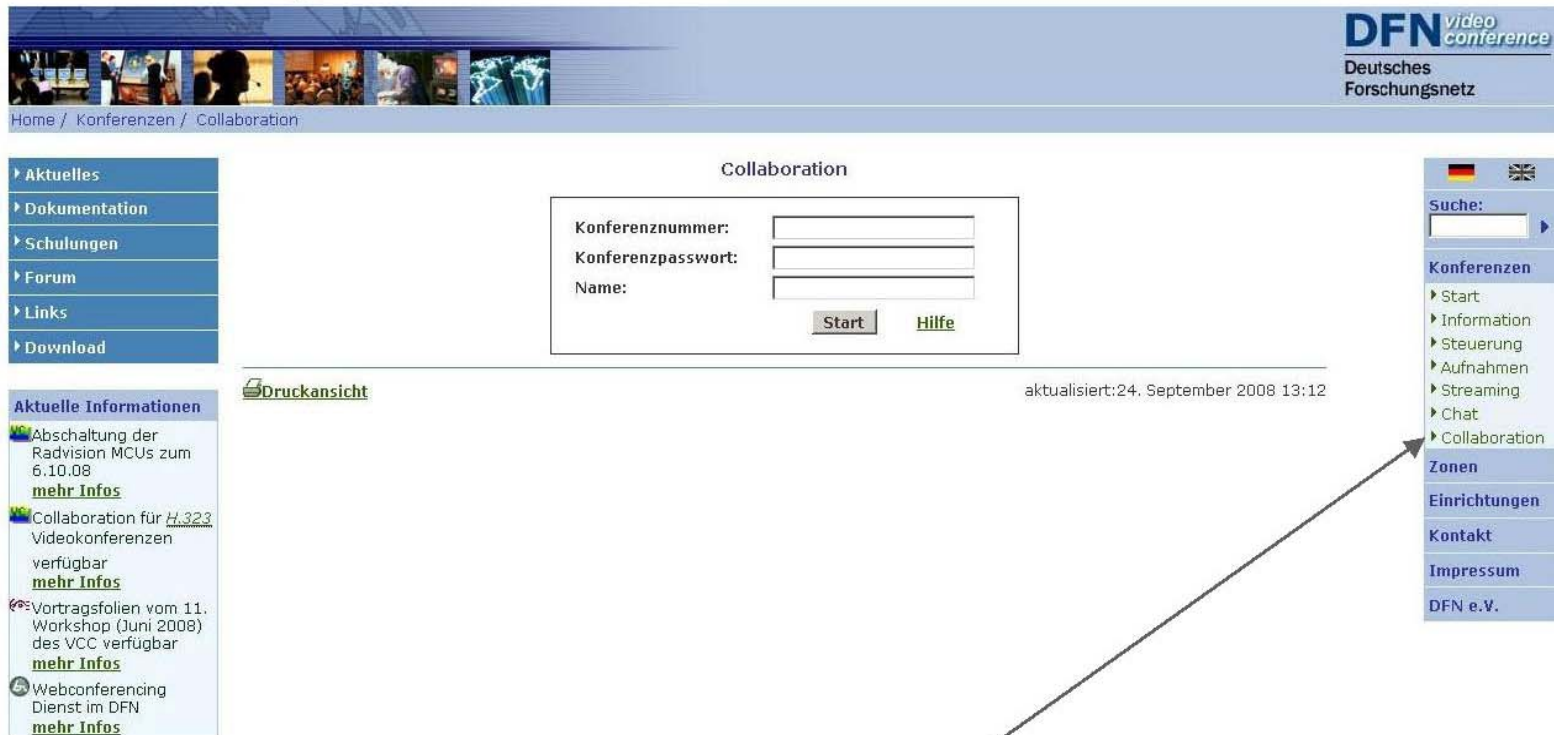
- SIP Dialin
  - Syntax der Einwahl: `Konferenz-ID@mcu.vc.dfn.de`
  - Beispiel: `97912678@mcu.vc.dfn.de`
- „Mute on join“: automatisches Stummschalten bei Einwahl

Demnächst Release MCU Firmware 3.0 (Q3/09):

- Web Conferencing Feature für ConferenceMe™
  - Teilnahme an Konferenzen mit SW-basiertem Client
  - Einwahl über VC-Portal
  - Einwahl nur in eine bestehende H.323-Konferenz
  - ConferenceMe und Streaming nicht auf derselben MCU möglich → kaskadierte Extra-MCU für ConferenceMe erforderlich

# DFNVC: Collaboration (II)

## Verbindung zum Adobe Connect Server aufbauen



The screenshot shows the DFNVC Collaboration portal. At the top right, it says "DFN video conference Deutsches Forschungsnetz". Below the header is a navigation bar with "Home / Konferenzen / Collaboration". On the left, there is a sidebar menu with options: Aktuelles, Dokumentation, Schulungen, Forum, Links, and Download. Below the menu is a section titled "Aktuelle Informationen" with three news items, each with a "mehr Infos" link. In the center, there is a "Collaboration" form with input fields for "Konferenznummer:", "Konferenzpasswort:", and "Name:", along with "Start" and "Hilfe" buttons. To the right of the form is a "Druckansicht" link and a timestamp "aktualisiert: 24. September 2008 13:12". On the far right, there is a vertical navigation menu with options: Suche, Konferenzen (with sub-items: Start, Information, Steuerung, Aufnahmen, Streaming, Chat, Collaboration), Zonen, Einrichtungen, Kontakt, Impressum, and DFN e.V. An arrow points from the bottom text to the "Konferenzen" menu item.

Zugang über das DFNVC-Portal für alle Konferenzteilnehmer

# Tests - VCC Dresden DFNVC

## Server based SW Clients

### Christian Meyer VCC

52. Betriebstagung DFN März 2010

Teil 2

## TANDBERG MOVI 3 / VCS



Teil 3

## POLYCOM CMA







**VCC**  
**Dresden**  
**DFNVC**

**Movi 3**

### Screenshot Videobild

Mehrpunktконференz auf Codian MCU mit dualer Präsentation (H.239)



Configured bitrate	2048 kbps	N/A
Encryption	AES 128 bit	AES 128 bit
<b>Video</b>		
Protocol	H.264	H.264
Resolution	640*480	1280*720
Configured bitrate	1024 kbps	N/A
Bitrate	995 kbps	1996 kbps
Total packet loss		44 of 418900
Current packet loss		0,0 %
Jitter		5 ms
<b>Audio</b>		
Protocol	AAC-LD	AAC-LD
Configured bitrate		N/A
Bitrate	0 kbps	65 kbps
Total packet loss		7 of 106753
Current packet loss		0,0 %
Jitter		2 ms
<b>Presentation</b>		
Protocol	H.264	H.263+
Resolution	1280*720	1024*768
Configured bitrate	1024 kbps	N/A

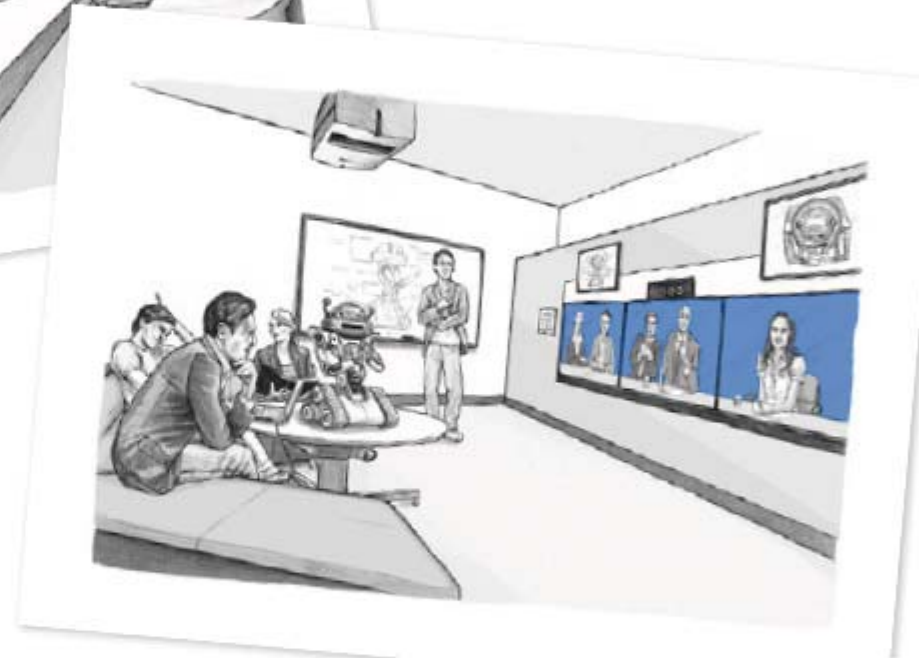
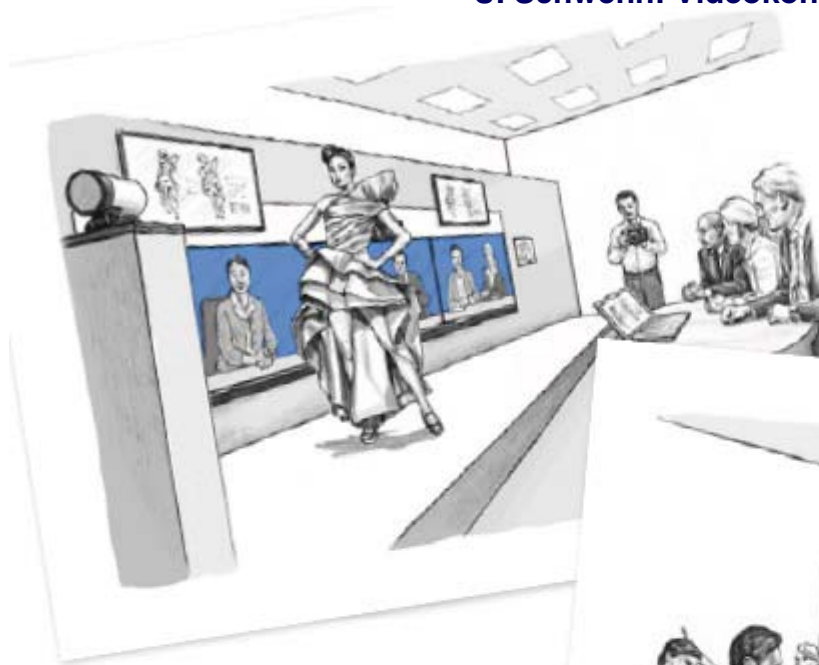
### Screenshot Statistikfenster

Mehrpunktконференz auf Codian MCU mit dualer Präsentation (H.239),  
Ansicht der Verbindungsstatistik

VCC  
Dresden  
DFNVC

Movi 3

# Telepresence



**TANDBERG**  
Telepresence  
**T3**  
Custom Edition

Extending telepresence to creative spaces doesn't mean losing the immersive in-person feeling, nor the intuitive connectivity, nor the ability to call who you want, when you want. The T3 Custom Edition brings the award-winning technology of the Telepresence T3 to tailored installation that meets a diverse range of customer requirements.

Bringing the benefits of Tandberg Total Telepresence to new ways of working.

# Telepresence

Startseite > Produkte > Telepresence und Video > Telepresence-Lösungen > Immersive Telepresence-Lösung > ATX HD 300

## ► Polycom® Architected Telepresence Experience™ High Definition 300 (Polycom ATX 300)

### Ultimative Flexibilität für Immersive Telepresence-Installationen

- Branchenführende Technologien und umfassendes Know-how bilden den Grundstein für maßgeschneiderte Immersive Telepresence-Umgebungen
- Flexible Konzepte passen sich optimal an vorhandene Räumlichkeiten, Möbel und Einrichtungen an
- Video, Audio und Daten in HD-Qualität sorgen für eine optimale Meeting-Erfahrung
- Spezifische Anwendungsanforderungen werden mit Unterstützung der Kompetenzen und Dienste unserer Partner umfassend erfüllt
- Durchgängige Lösungen bieten eine realitätsgetreue Meeting-Erfahrung



# Telepresence



LifeSize® Conference 200™



## Full HD Telepresence, Tailored to your Environment

**Superior telepresence is now achievable beyond the board room.**

Now more users in more places can realize the benefits of telepresence to improve productivity, working face-to-face with colleagues in remote locations.

LifeSize Conference 200 is the next step in telepresence - Full HD video, 1/3 the bandwidth of comparable solutions and designed for deployment beyond the fixed telepresence suite.

With the LifeSize Conference 200 solution, you get the most advanced technology and most immersive experience available today: Full HD, 1080p30, 720p60, and 720p30 dual streams to share data and documents in full motion, high definition. You also get an embedded multipoint control unit (MCU), complete with transcoding.

Video Quality	HD Telepresence 1920x1080 - 30 fps or 1280x720 - 60 fps 16x9 format
HD Monitors	 3 Video, 1 Data
HD Cameras	 Multiple



# Telepresence

PRODUCTS & SERVICES > PRODUCTS > CUSTOM

## Teliris Custom Telepresence™

Customize the Teliris Telepresence experience for your unique meeting and collaboration needs

Teliris Custom Telepresence™ is the only solution available that allows telepresence features and capabilities to be integrated into new environments, such as Research and Development labs, conference halls and large meeting rooms, factory floors, and oil exploration platforms, among other environments. Teliris Custom Telepresence™ allows for a nearly unlimited application of telepresence. The solution represents the formalization of our history as the only vendor with the technological nimbleness to successfully wrap telepresence around specific business requirements.

The Teliris Custom Telepresence™ solution is fully compatible with all Teliris Telepresence environments and Immersive Collaboration tools. Through the Teliris Telepresence Gateway™, the solution interoperates with other standards-based telepresence systems and standards-based traditional videoconferencing systems from a myriad of vendors. Additionally, the solution incorporates Teliris' patented Advanced Virtual Vectoring technology that ensures accurate eye-lines for single and multiple location meetings.



"With Teliris Telepresence, we forget we are across the ocean from our peers."

*CEO, Large Investment Bank*



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Cisco

Telepresence

TelePresence

# Telepresence Interoperability License

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## Telepresence Interoperability Protocol

More than ever, organizations are adopting telepresence solutions to change the way they work, live, learn, and play. They need those solutions to integrate seamlessly with existing equipment, without sacrificing benefits or features.

Cisco TelePresence takes advantage of open standards, such as H.323, to deliver any-to-any interoperability with standard- and high-definition videoconferencing systems and other collaboration applications.

Building on the idea of open standards, Cisco's Telepresence Interoperability Protocol license allows other vendors to provide immersive, telepresence-quality experiences with their own products. By licensing this technology, Cisco offers other vendors the opportunity to:

- Use a switched architecture to reduce the need for media processing, lower the cost of media resources, and decrease latency
- Use the network as a platform for easier implementation and deployment
- Scale interoperability with current Cisco Unified Communications Manager-based solutions

# Telepresence

## Telepresence Interoperability - The Fall Internet2 Trials

December 8, 2009 | [Howard Lichtman](#)





# Telepresence Interoperability Demo

The first industry-wide immersive Telepresence interoperability demo was held at the Fall Internet2 meeting in San Antonio, Texas in October. The trial **successfully** connected multi-codec systems from **Polycom** (TPX HD 306, RPX 200, and RPX 400), **LifeSize** (Room 100), and **Tandberg** (T3), all of them operating on different networks (Internet2, Commodity Internet, Polycom network, IBM network, and Tandberg network). Eight test cases covered multipoint calls using both voice switching and continuous presence. The telepresence systems connected to either **Polycom RMX 2000** conference server (controlled by the Multipoint Layout Application, **MLA**) or to **Tandberg Telepresence Server**, while the two servers were connected to each other. Basic connectivity worked in all eight test cases.

## 'TELEPRESENCE INTEROPERABILITY IS HERE!'

The results from the telepresence interoperability demo were discussed on October 7 in the session "Telepresence Interoperability is Here!"

” <http://events.internet2.edu/2009/fall-mm/agenda.cfm?go=session&id=10000758&event=980>.

Stefan Karapetkov Emerging Technologies Director at Polycom Inc. [videonetworker.blogspot.com](http://videonetworker.blogspot.com)

# The Telepresence Vanishing Act      Telepresence

## Wainhouse Research - Andrew W. Davis / Ira M. Weinstein - Summary

This Document is Available to VCP and PLATINUM PRO Subscribers

“Telepresence” or multi-codec systems are now much more flexible than they were in the past.

Customers can purchase systems with the appropriate size, furniture layout, seating capacity, and collaboration capabilities to meet their needs.

At the same time, standard videoconferencing systems have continued to evolve, with standard product offerings now including 1080p video and displays of up to 65 inches. **And with more systems integrators paying more careful attention to lighting, sound, and room layout, the videoconferencing experience is improving dramatically.**

**In fact, the experiences are converging.**

For those who insisted that telepresence was a separate market, that claim is rapidly losing its meager foundation.

**The net is that telepresence as a market segment is vanishing.**

# Bedarf und Lösungen am IPP



# Lösungen IPP

IPP-Garching



Seminarraum RZG 12.11.2008

## Regie Hörsaal Clausthal

# Lösungen



# LifeSize, Tandberg, Polycom, Radvision - Hardware



LifeSize® Passport™



Telepresence  
Server HD



TANDBERG  
Codec C40 HD  
TANDBERG  
Quick Set C20



LifeSize® Multipoint™



Polycom® RMX™ 4000



HDX™ 6000



SCOPIA VC240

All-in-One Video Conference Desktop System

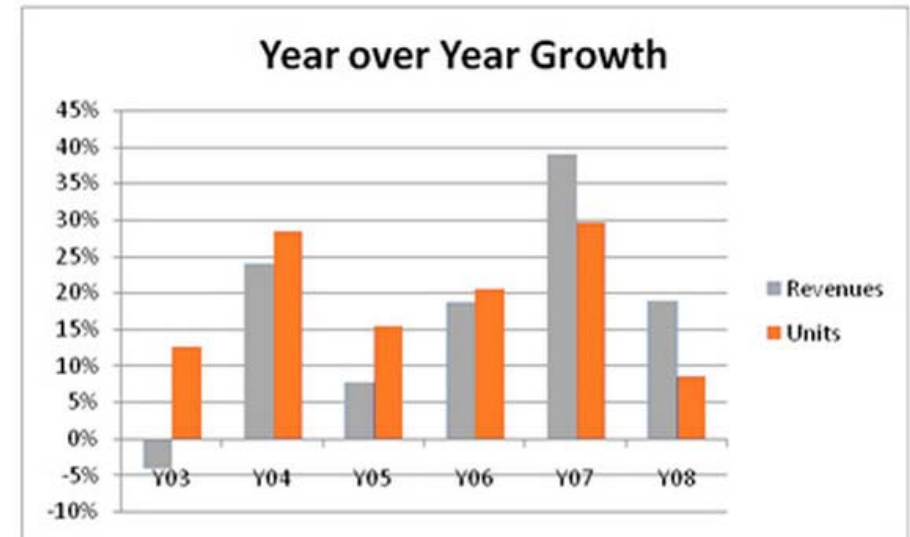
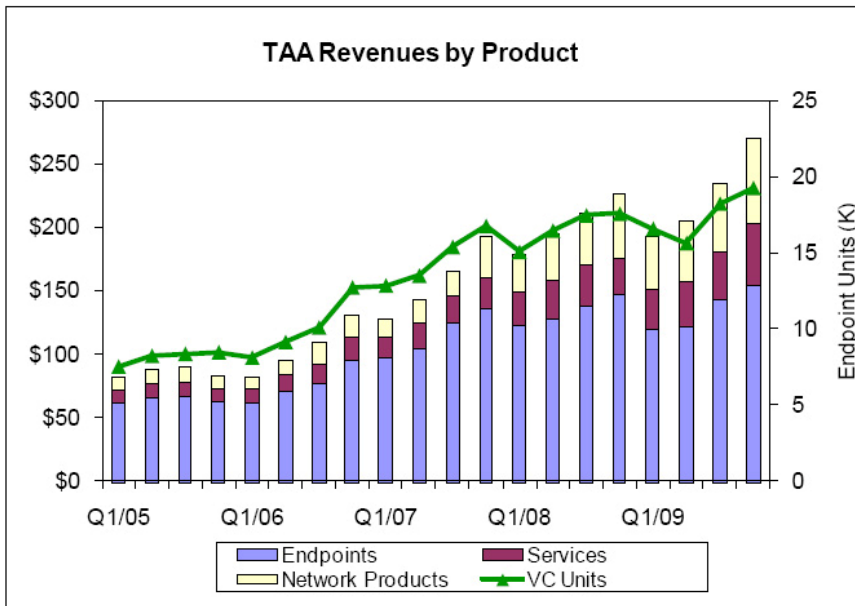
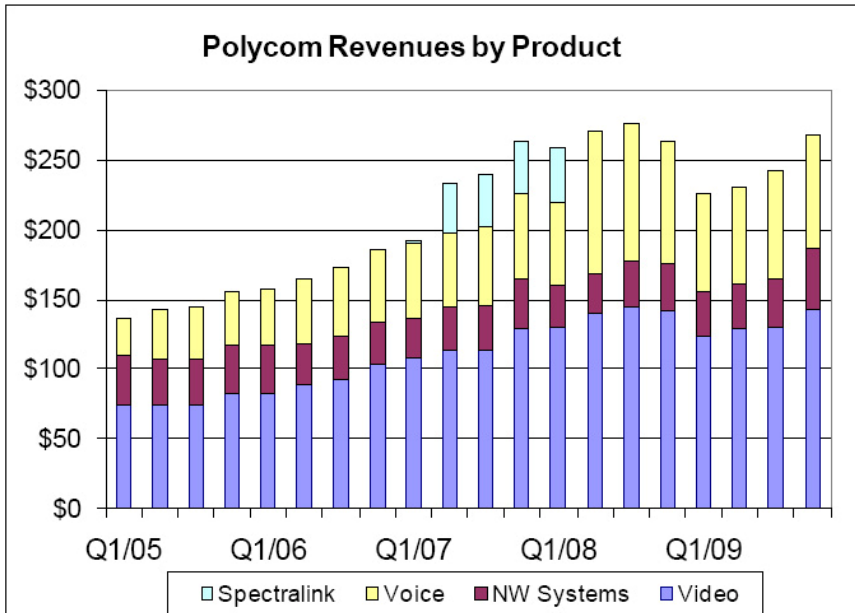


SCOPIA  
Elite 5000  
MCU  
Radvision

# Wainhouse Research Bulletin

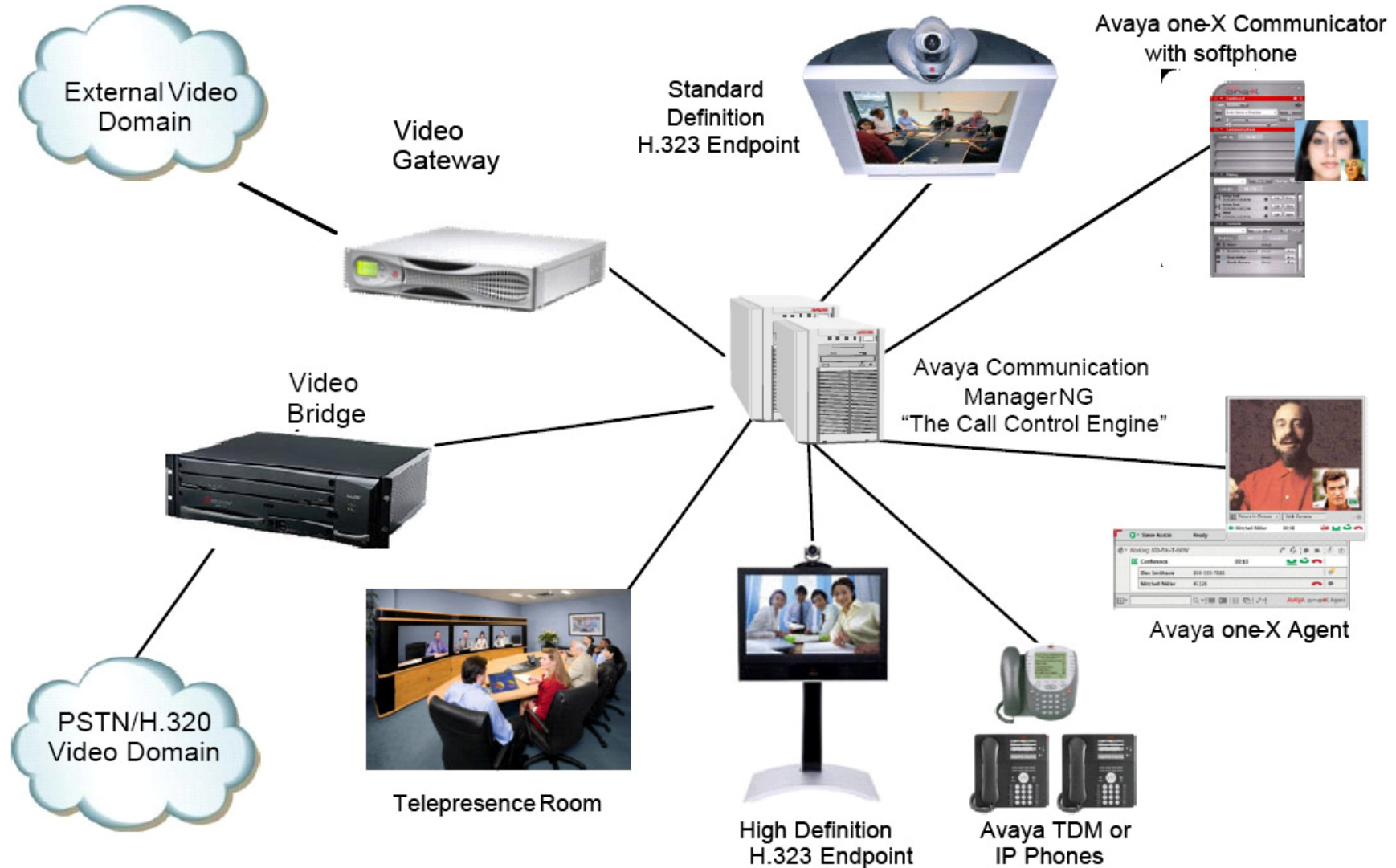
Vol. 11 #05  
February 22,  
2010

## Markt



# UC - Unified Communication

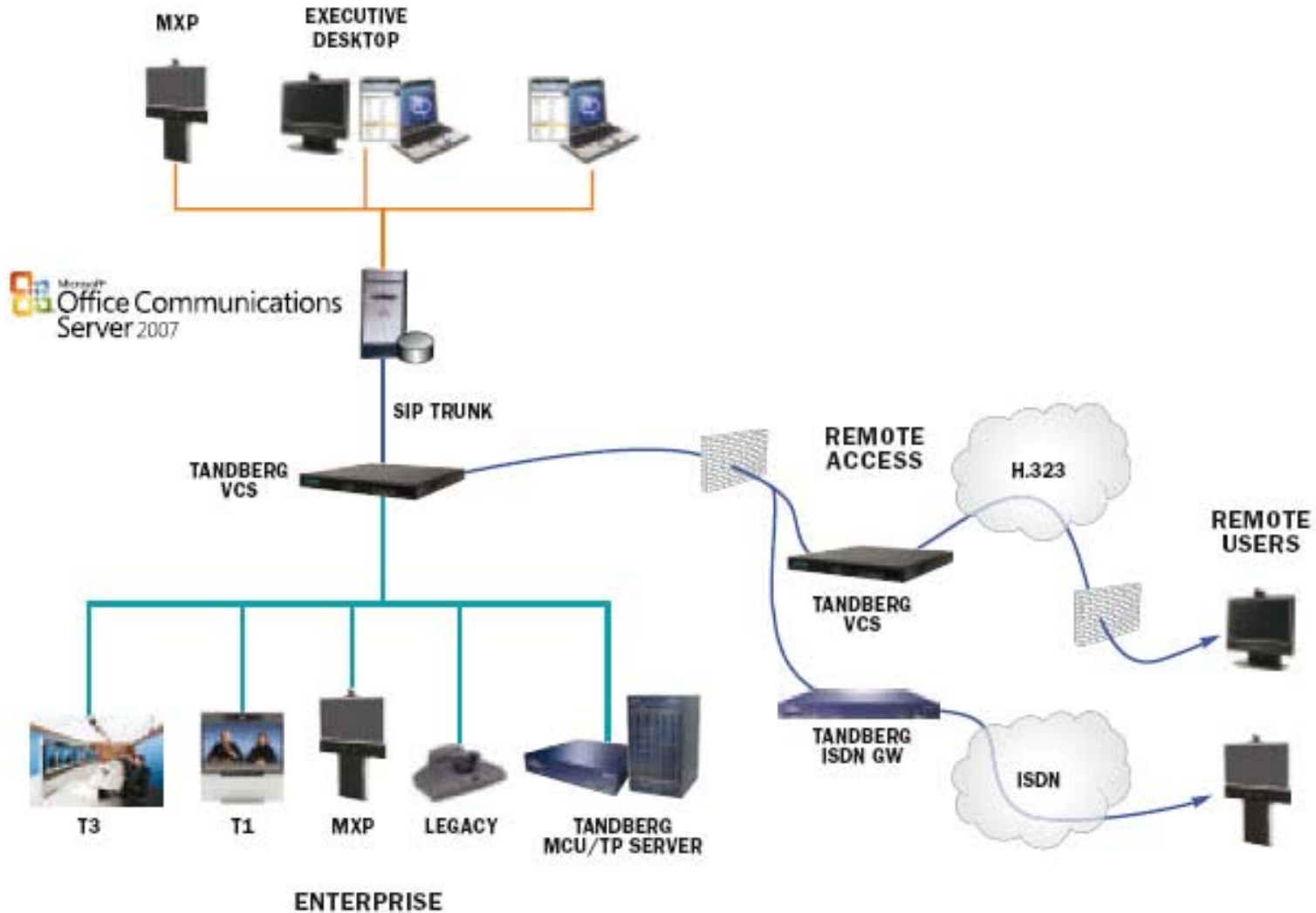
Figure 6. Avaya's video telephony architecture. **With Polycom**



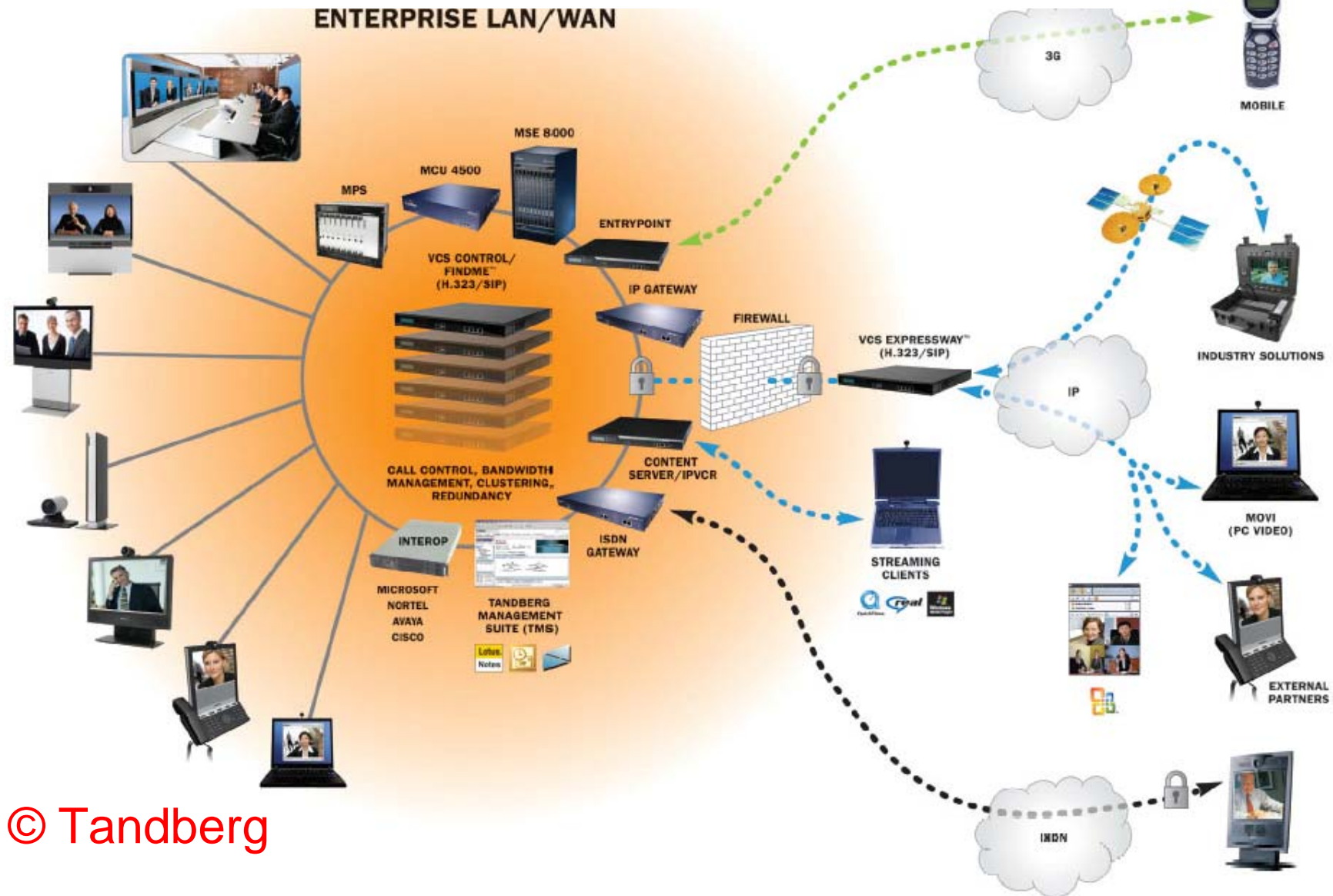


# UC - Unified Communication

## TANDBERG INTEROPERABILITY WITH MICROSOFT OFFICE COMMUNICATIONS SERVER 2007



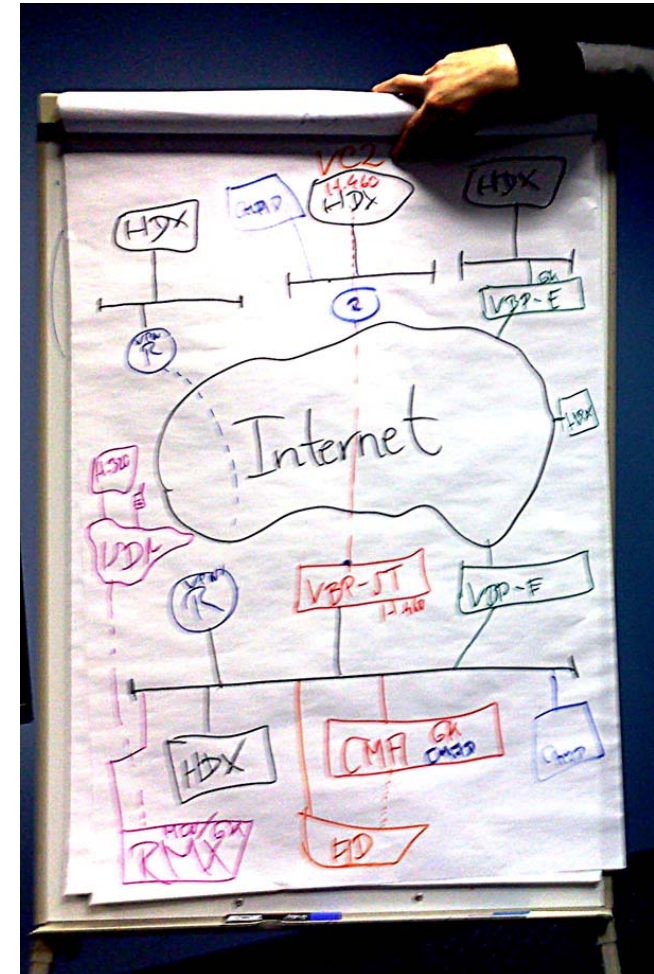
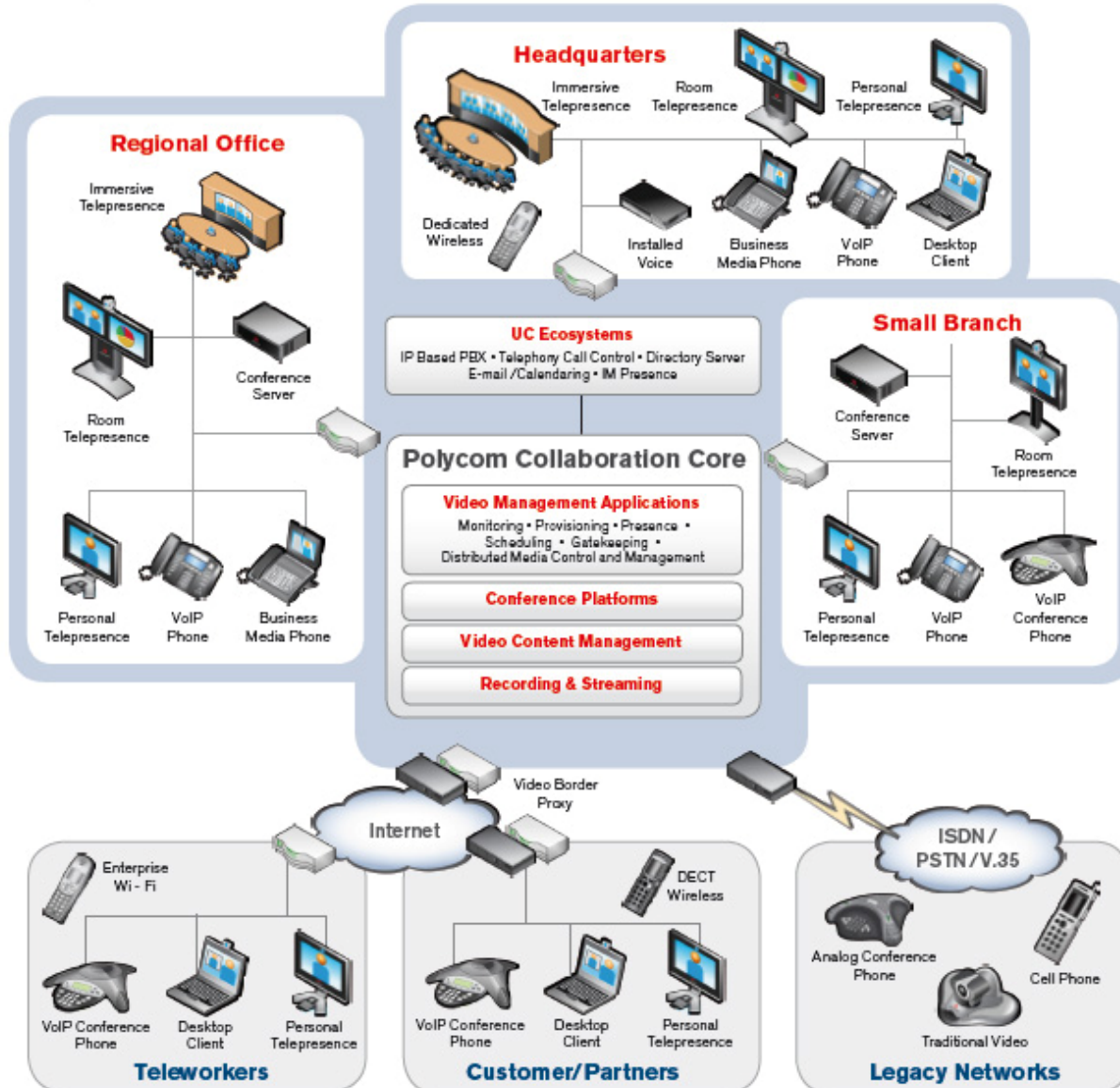
# Tandberg Infrastruktur



© Tandberg

► Polycom\* Solution Architecture

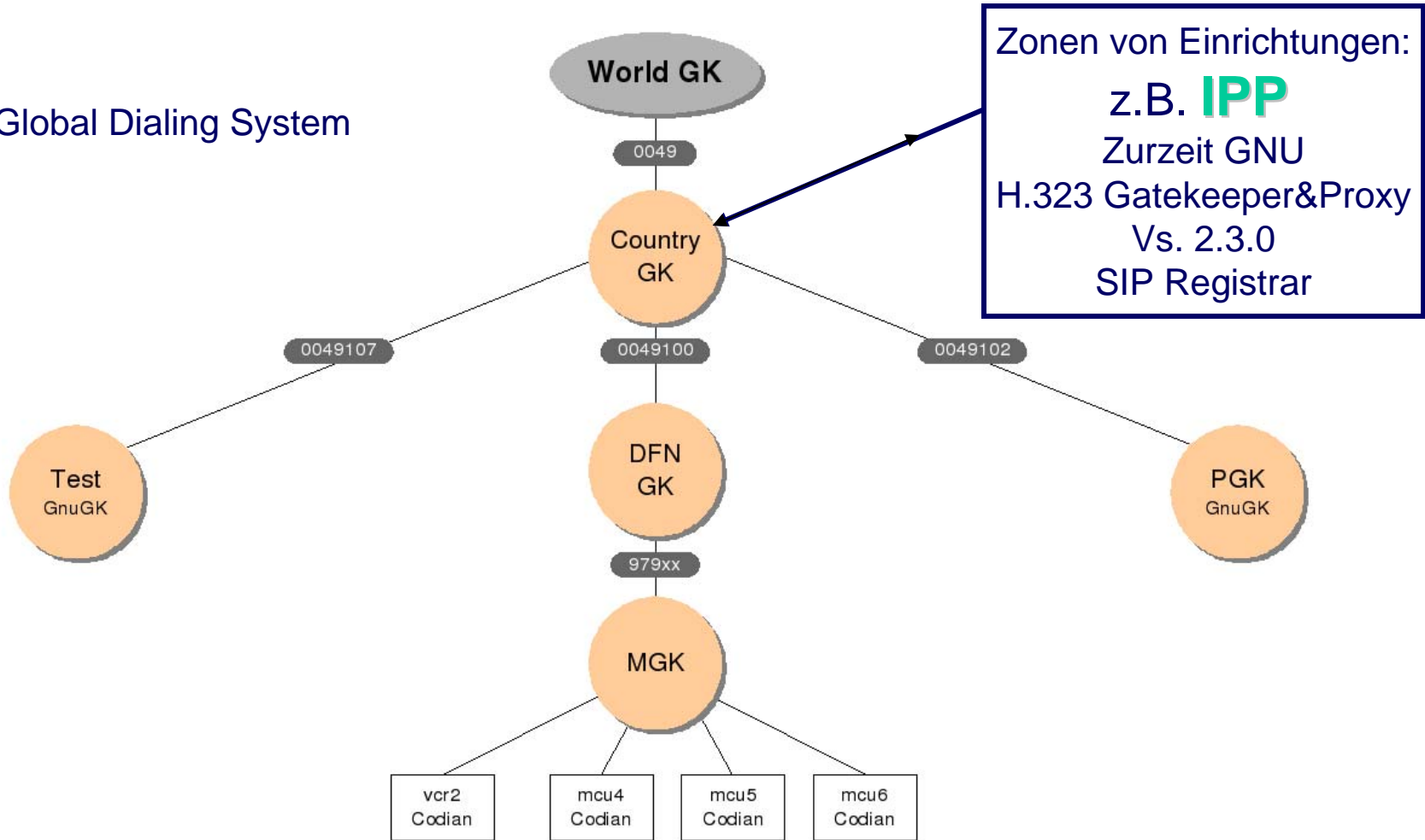
# Infrastruktur Polycom



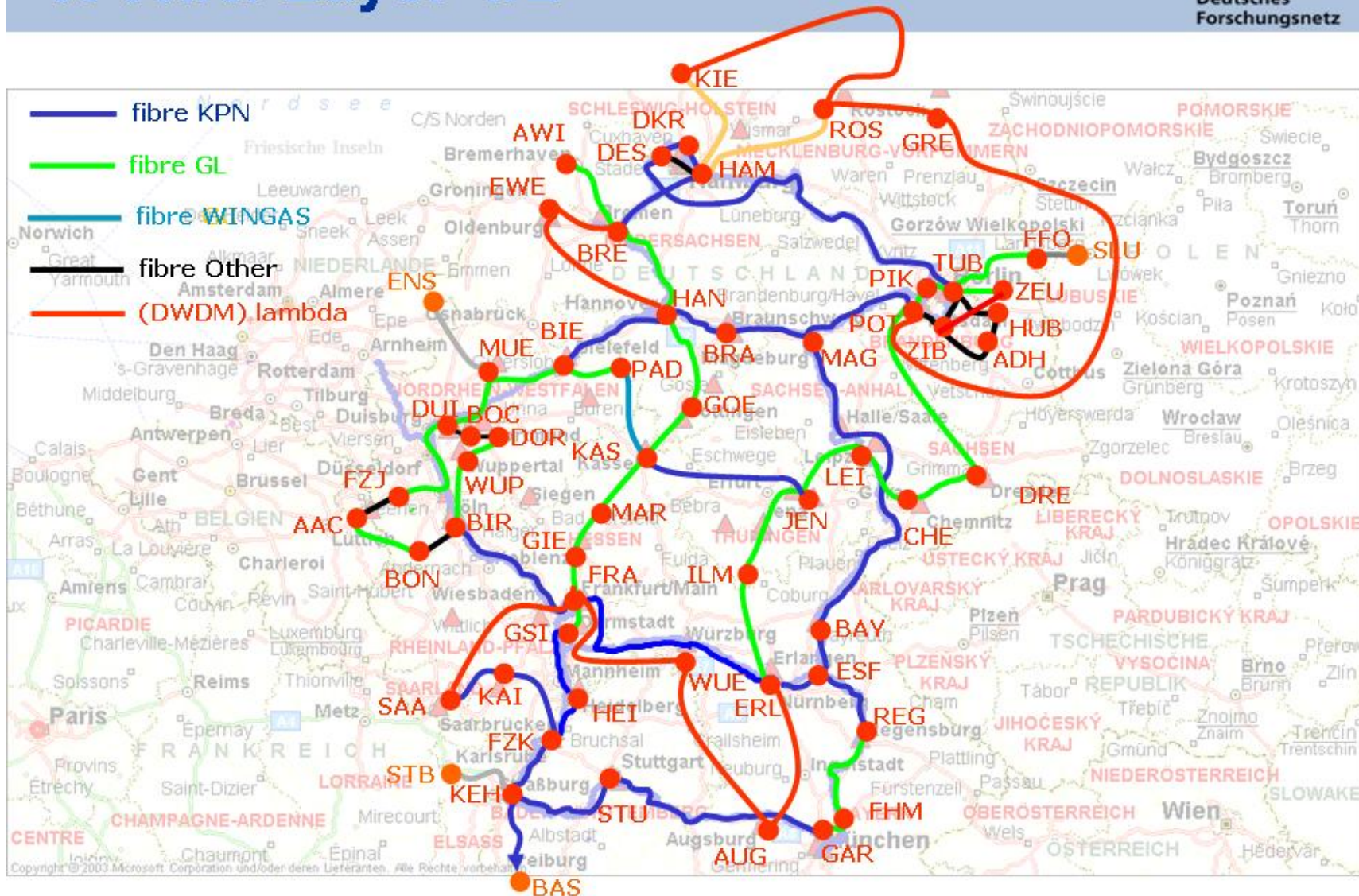
# „Unsere“ DFNVC

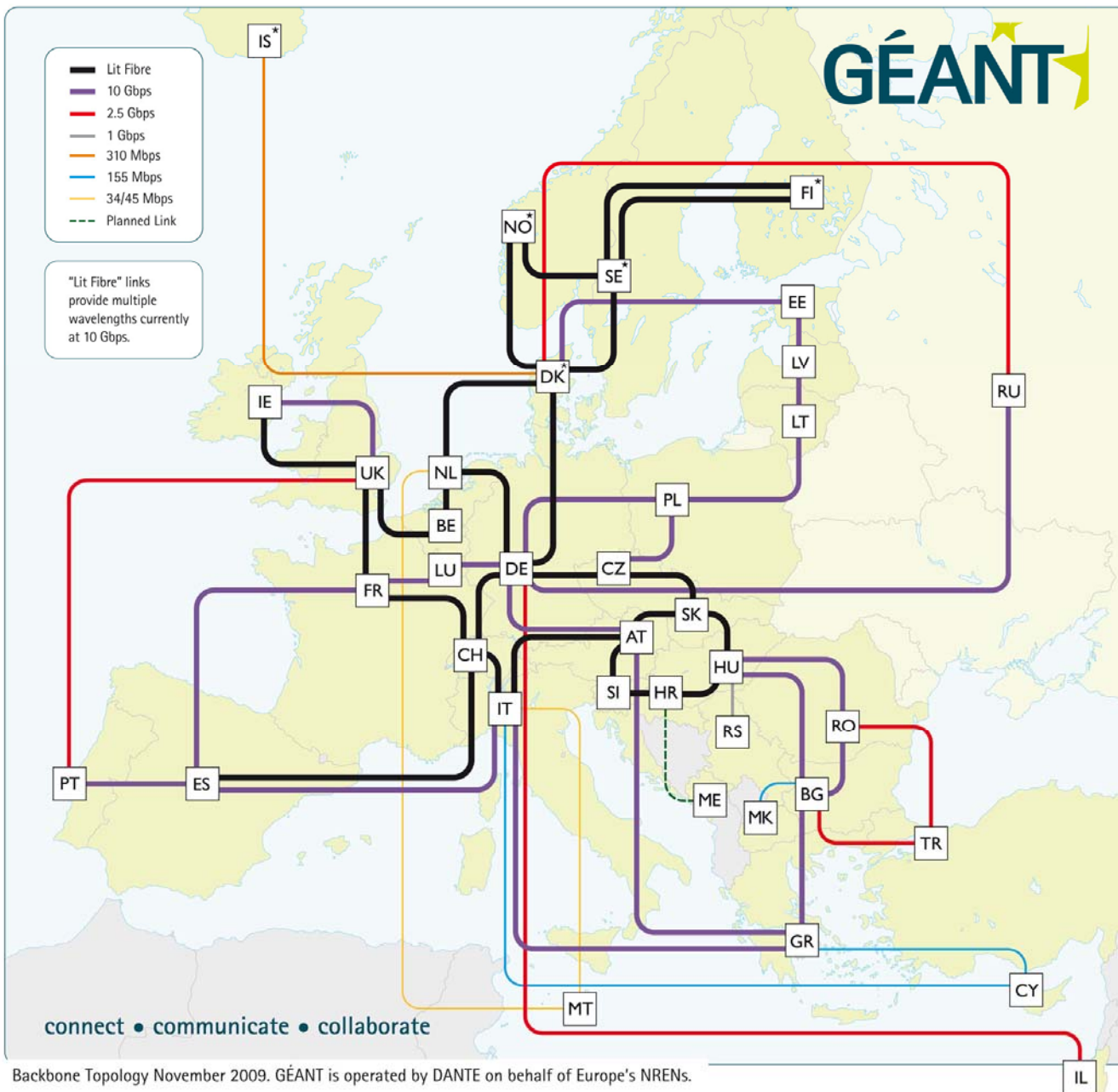
# Infrastruktur

GDS = Global Dialing System

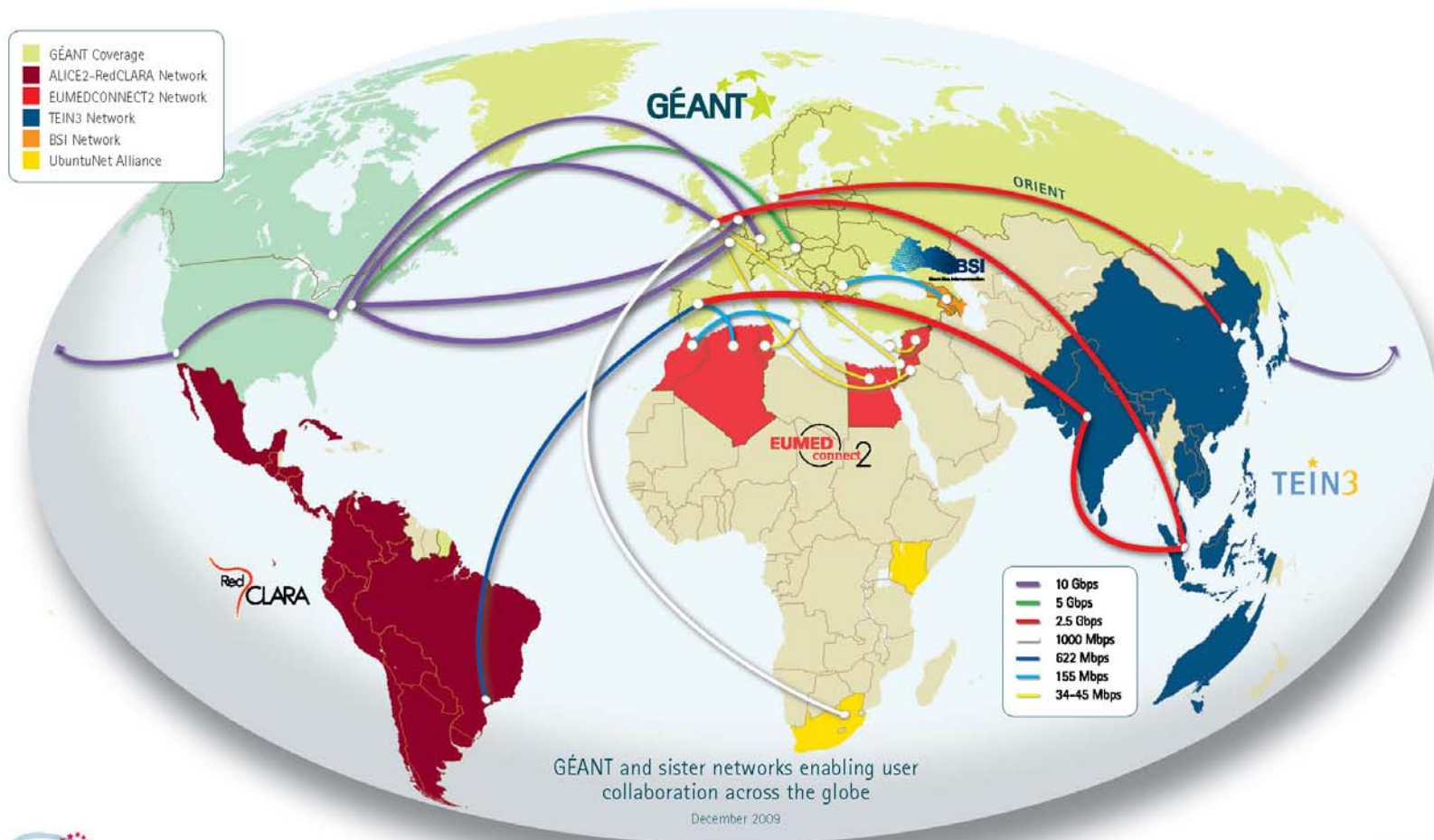


# X-WiN: Layer 1/2





# GÉANT At the Heart of Global Research Networking



## New: AVCI

# Dialing Plans

The Audio Video Communication Infrastructure Group AVCI is a (new) forum for collaboration regarding audio/video communication infrastructure issues including dial plan, directory, scheduling, and related topics.

### Potential Dialing Plans

Potential dialing plans will be enumerated, that are available to our community, including how they work, how they would be implemented, and advantages/disadvantages.  
i.e.:

- E.164
- **GDS (Global Dialing Scheme)**      **0049 893299 6003**
- ENUM
- URI      6003@rzg.mpg.de
- SIP      6712@sip.rzg.mpg.de
- **IMS (IP Multimedia Subsystem)**



# „Unser VIKTAS Club“

# Sonstiges



# Zusammenfassung

## Thesen

- TP Qualität möglich mit Standard Komponenten
  - Probleme Lösbar (IP, QoS, Firewall, Global Admin)
  - Hilfe von  
DFNVC, VCC, VIKTAS, VC-Gruppe RZG - Profi-Planer nutzen!
  - Desktop Systeme meist Windows basiert, Mirial (auch für Macs)
  - Server basiert: CMA und Movi3
  - Klassisches VC oder Telepresence – **Keine Bedeutung für uns**
- Beide Welten konvergieren –

**Was wird aus Tandberg unter Cisco?**

- Wichtig: **Akzeptanz ~ € x T x M x O**

**Benefits** (Gute Akzeptanz vorausgesetzt)

Reise & CO2 Reduktion, Manpower Effizienz

Videoconferencing erhöht Lebensqualität

# Reisen, CO2, Lebensqualität

# Umwelt

\* <http://www.atmosfair.de/>



**Why not say goodbye to red-eye?**

Feeling dog tired? Bags under your eyes? Why not take better care of yourself and have an extra hour in bed?

Vodafone's new certified videoconferencing (VC) rooms and lounges take the pain out of travelling. To find out more visit <http://intranet.vodafone.com/VC-Class>.

**Travel VC Class.**





**Are you feeling green?**

It's good to meet up and see your colleagues face-to-face. And now you can do that every day and still keep this little frog happy.

Vodafone's new certified videoconferencing (VC) rooms and lounges are the greenest and most environmentally-friendly way to meet. To find out more visit <http://intranet.vodafone.com/VC-Class>.

**Travel VC Class.**





**Are your loved ones missing you?**

If you feel lonely when you travel on business, you can be sure that your family does too. Now you can have face-to-face meetings abroad and still be home in time to give your little bunnies a goodnight kiss.

Vodafone's new certified videoconferencing (VC) rooms and lounges take the pain out of travelling. To find out more visit <http://intranet.vodafone.com/VC-Class>.

**Travel VC Class.**





**Are your legs getting longer?**

Or is airline seating getting smaller and smaller leaving you creased and wrinkled every time you fly? Now you can have face-to-face meetings abroad with as much leg-room as you want.

Vodafone's new certified videoconferencing (VC) rooms and lounges take the pain out of travelling. To find out more visit <http://intranet.vodafone.com/VC-Class>.

**Travel VC Class.**



© vodafone

Danke für Ihre Aufmerksamkeit