

# IP Telephony

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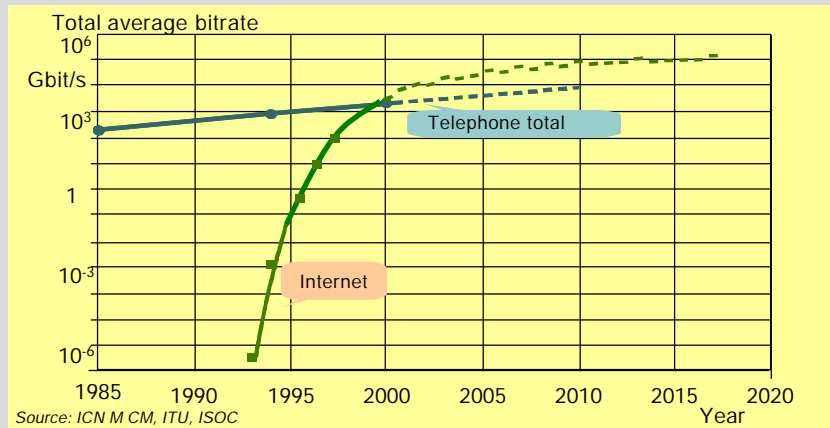
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## Content

- 1) Drivers**
- 2) Principles
- 3) Application
- 4) Challenges
- 5) Standards
- 6) Current Product
- 7) Closing

## Driver for tomorrow's communication

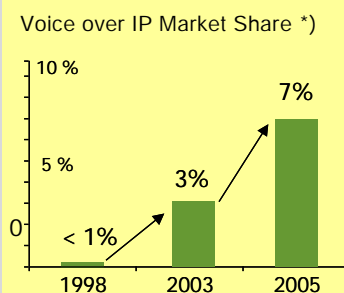
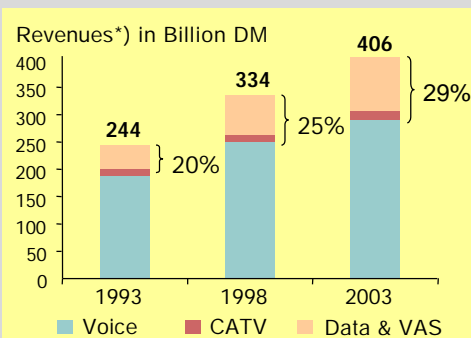
### Bitrate growth in data networks is higher



⇒ The internet becomes a second universal network besides the voice network.

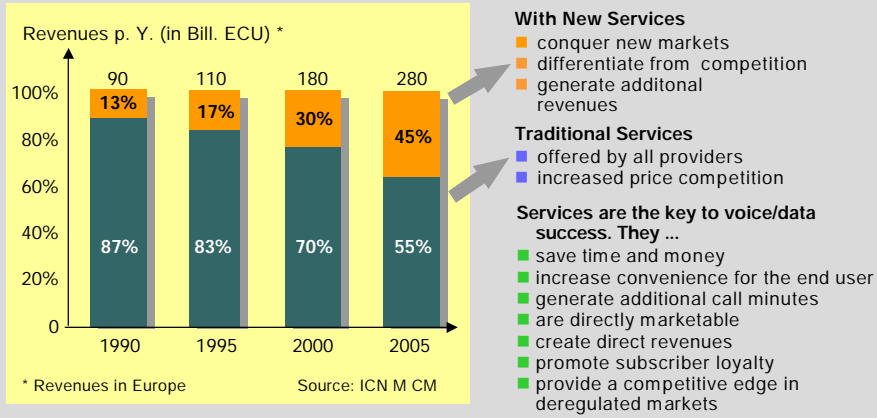
## Driver for tomorrow's communication

### Voice stays the main revenue generator



⇒ Voice service is lucrative for voice and data network providers

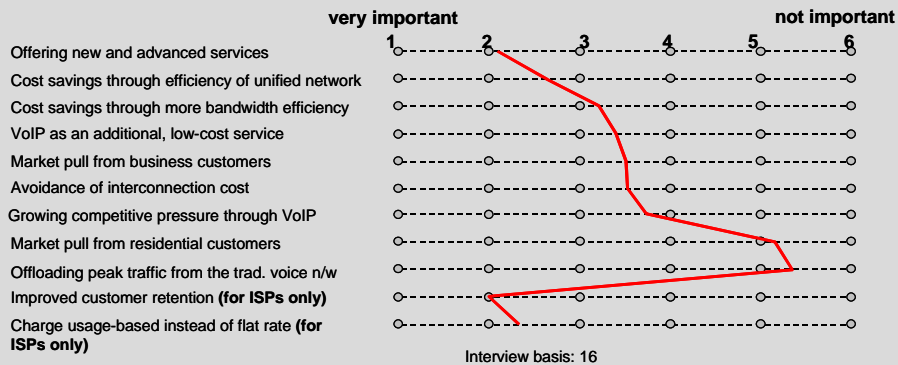
## Driver for tomorrow's communication The competition will be decided on services and price



⇒ The key to voice/data success lies in advanced multimedia services and applications

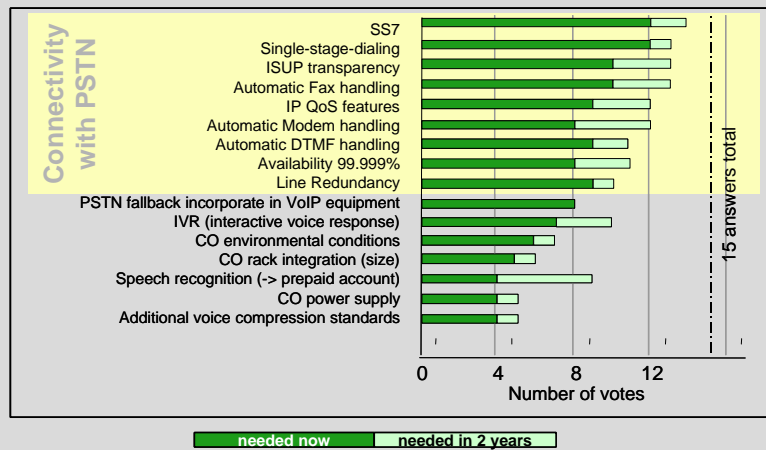
## Operators' Motivation to Deploy VoIP Services

Operators' Rating of Drivers for Voice over IP  
average of all surveyed operators



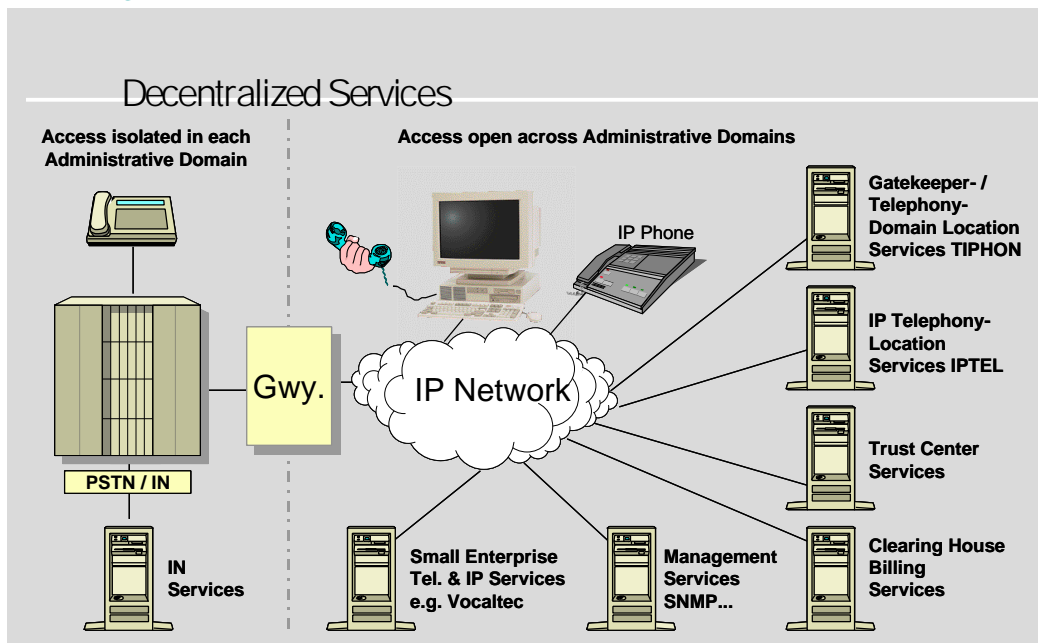
## Expected GW Features

Which features do operators expect ?  
(multiple votes per operator possible)



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ITU Workshop on IP Telephony, Geneva, June 2000

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## Attraktive Internet Features

Subscriber Controlled Input via Internet (ISCI)

E-Mail Waiting Indication (EWI)

Call Waiting Internet Busy (CWIB)

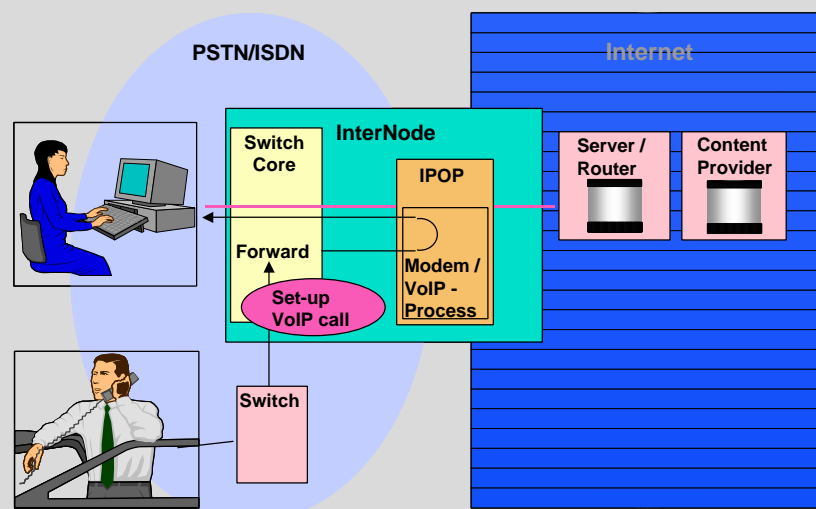
Call Completion Internet Busy (CCIB)

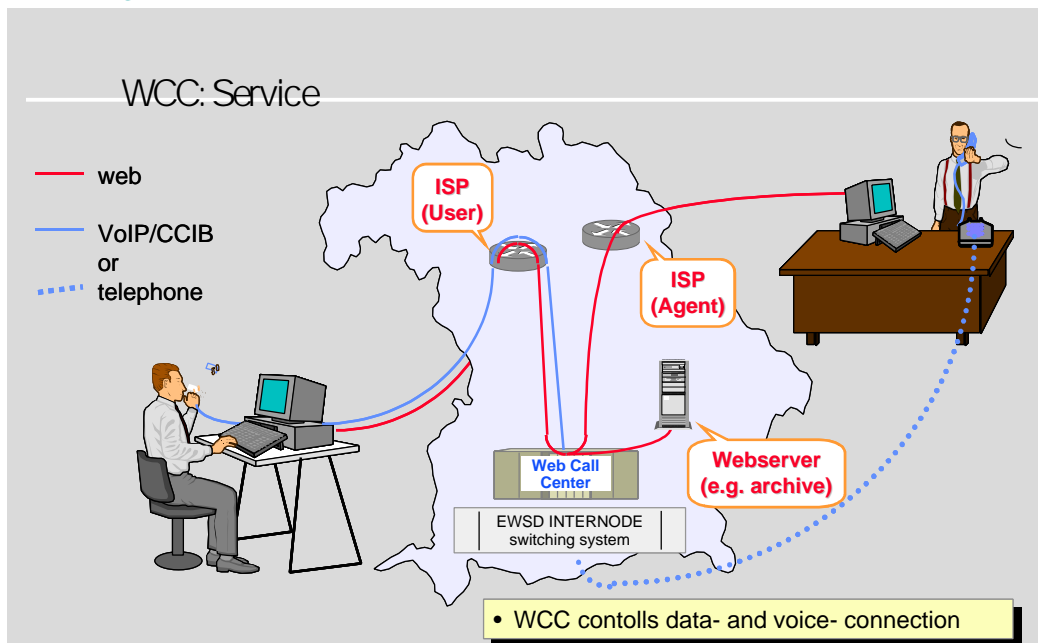
Voice over Internet (VoI)

Improved Voice-over-Internet (IVoI)



## CCIB: Functional Principle

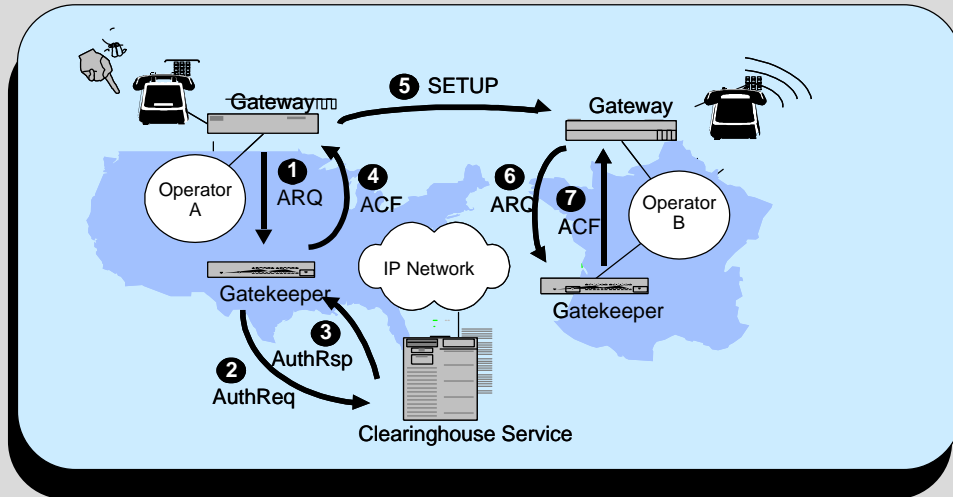




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## Gatekeeper Pricing Protocol: Overview



## Management: Trust And Authentication Services

### *"Trust by Wire" to "Trust by Authentication"*

- Trusted authorities must be deployed  
e.g.: Trust centers issue security certificates / tokens
- Telco's are traditionally trusted  
Operation of trust centers generates new income (Verisign..)
- None repudiation evidence gathering  
Trust centers can verify, trace and store CLI information for



## Telephone User Habits / Paradigms:

### *Do users want anything but dial?*

- Transparency for Today's Devices Required?  
e.g.: G.3 FAX, modem, look and feel, RJ11 plug
- Real-time Billing  
e.g.: Coinboxes, Prepaid-Cards, and hotel billing
- Connection Setup Time  
Is location finding fast enough?
- Call Blocking (Non Payment, 3rd Party ...)  
What are the requirements that can not be handled?

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Standard

ITU-T SG 16 concentrates on Multimedia Terminals and Security; develops IP Telephony Standard H.323; TIPHON provides input for this group. ([www.itu.org](http://www.itu.org))



Internet Engineering Task Force

IETF investigates interworking between Internet and Intelligent Networks. TIPHON influences via member organizations. ([www.ietf.org](http://www.ietf.org))



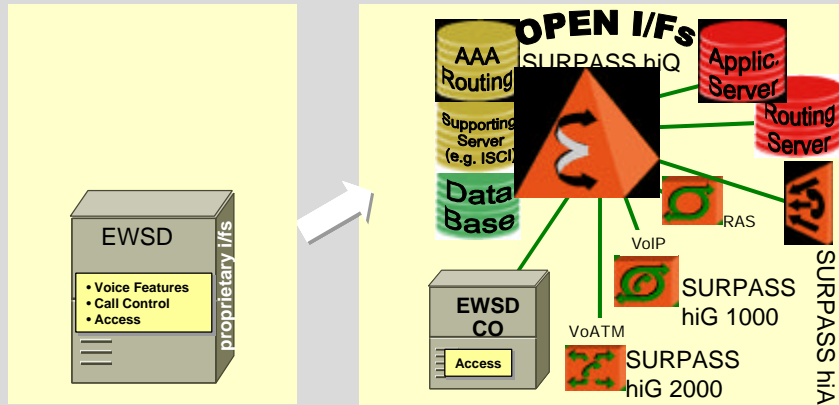
TIPHON

TIPHON/ETSI is globally accepted as leading body for internet gateway standardization. ([www.etsi.org/tiphon](http://www.etsi.org/tiphon))

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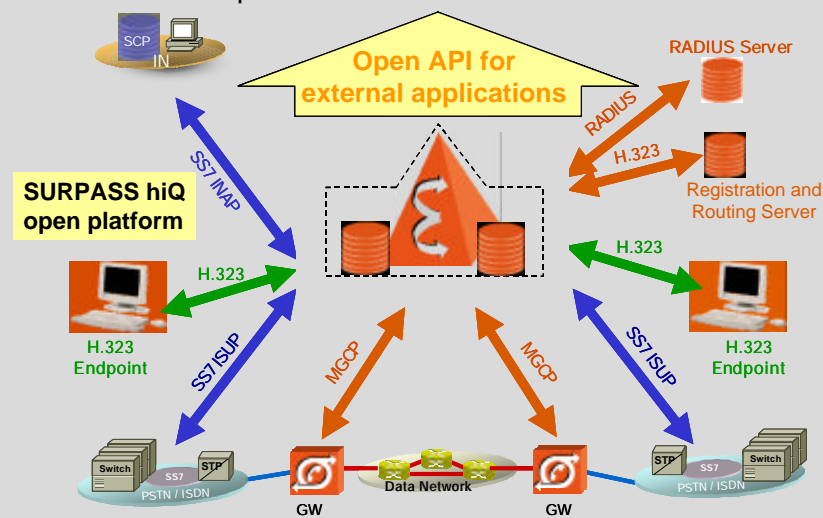
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## Siemens evolutionary strategy for carriers From EWSD to SURPASS with an open architecture

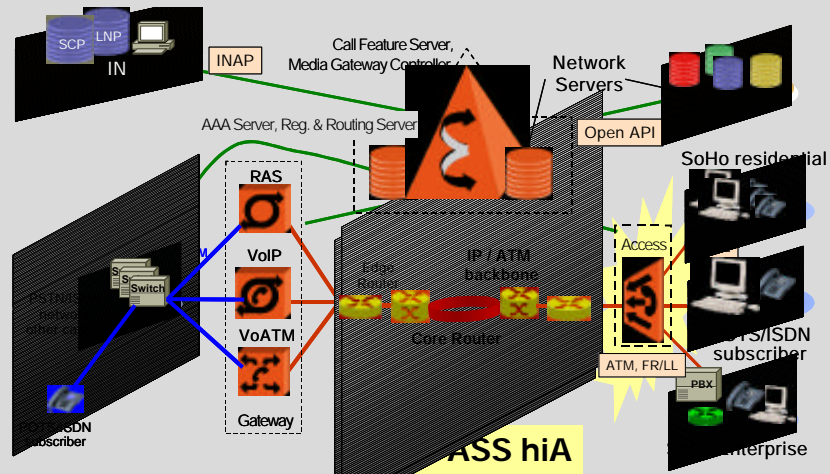


Siemens' leverage: the large installed base and best in class voice features.  
Market requires: Open interfaces and decoupling of control and transport.

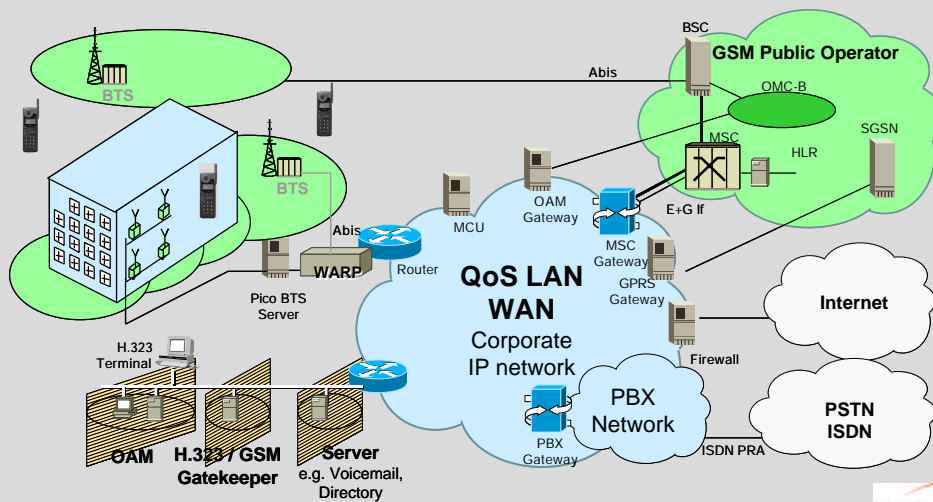
## SURPASS hiQ Open Platform with standard interfaces



## Multiservice Access – SURPASS hiA



## Siemens Corporate GSM Solution



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## Visions: Is IP switching the solution for voice?

