

IBM - Global Technology Services

CABSAT 2007

IBM Converged Communication Services – IPTV Infrastructure

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Agenda

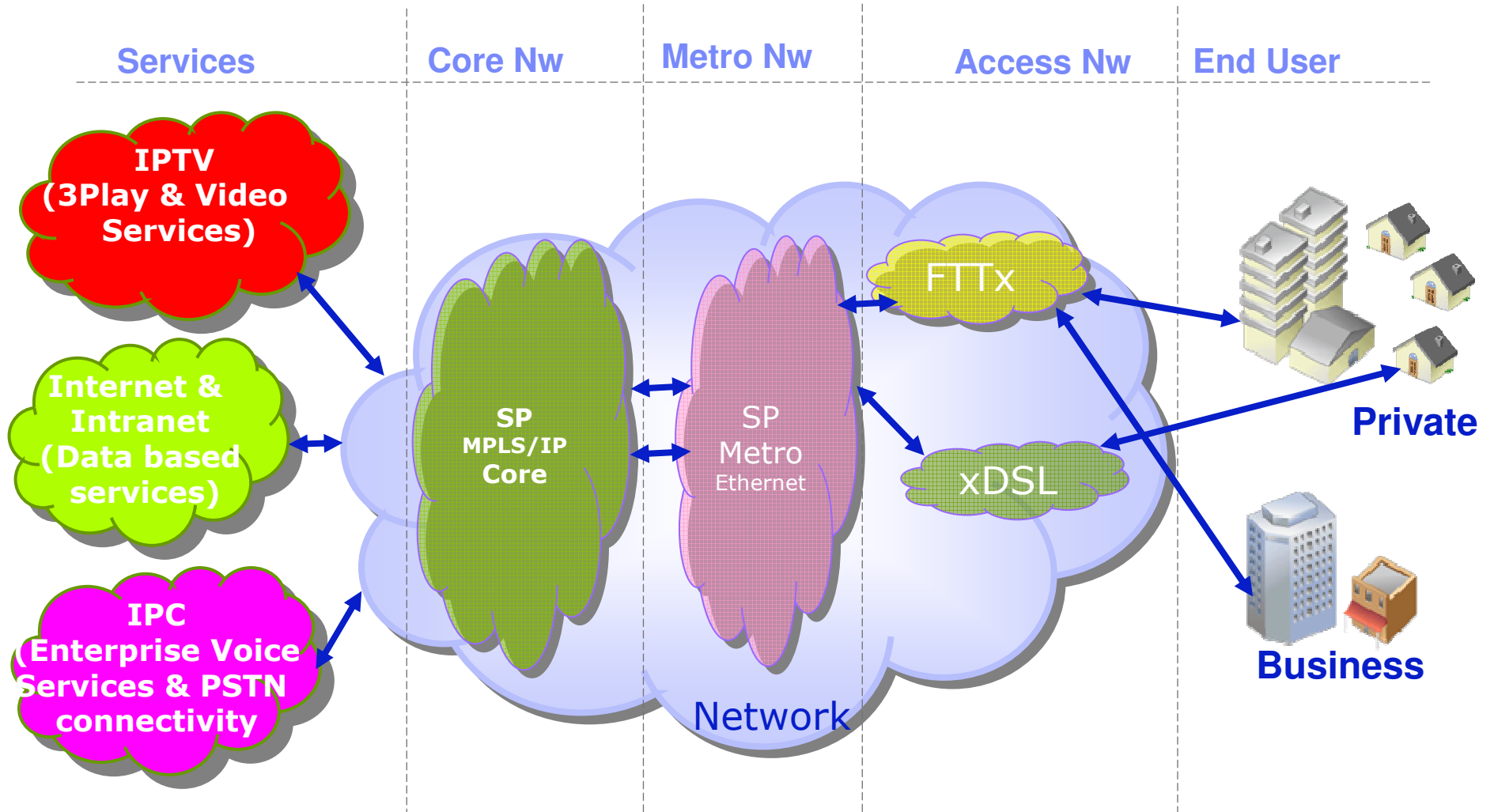
Why IPTV is important??

IPTV Service Product, Rel 1

Demo Center, Lagaude France

Summary

Converged Communications Infrastructure



IPTV Infrastructure Services was defined as Key Focus area by IBM & Cisco

Targeted market

- 2nd and 3rd Tier Telcos
- Challenger Service Providers moving to Value added Services
- ISPs and xSPs providing 3Play or IPTV Services

Service Product Development

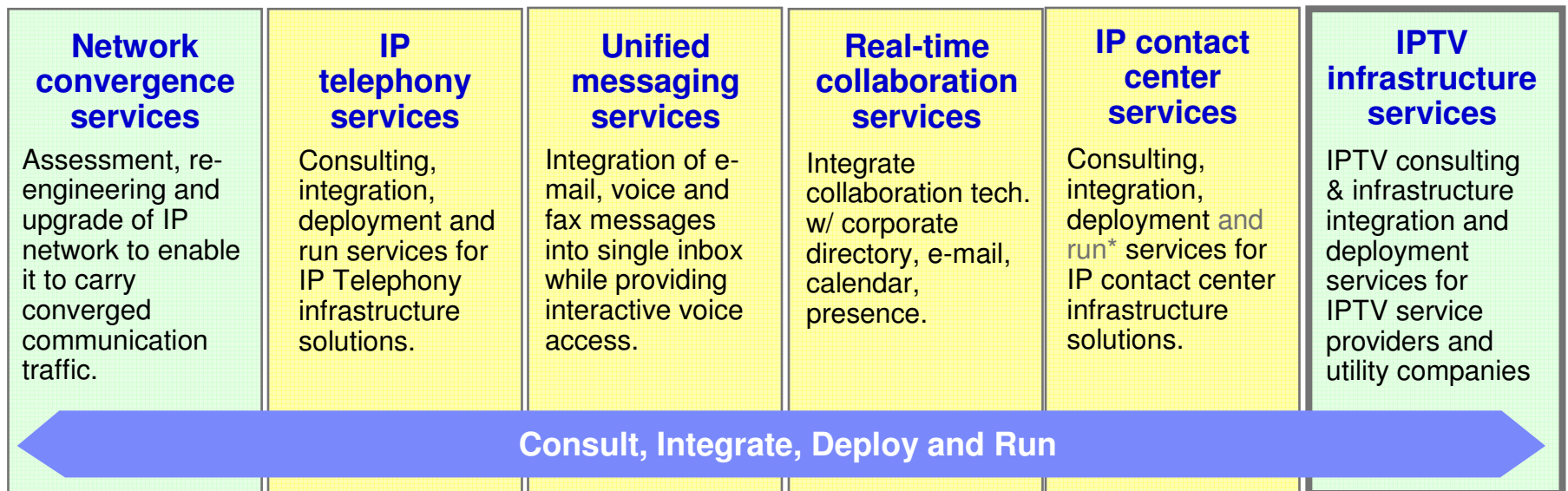
- IPTV is a CORE component of ICS Converged Communication Services portfolio
- IPTV Service Product is planned to be fully available during the 1Q 2007
- Cisco & IBM jointly agreed reference architecture and component model are used as base on this Service product

Investments

- IBM has IPTV Leader, SWAT team, Marketing Team and BusDev Teams nominated
- Cisco has nominated IPTV Leader and SWAT Team, Sales and Marketing leaders
- DEMO center built to Lagaude, IBM Location, Portal, Servers etc. and CISCO Nw Infra and Scientific Atlanta Head End and Home Domain

The IBM Converged Communications Services portfolio has its foundation in the IBM converged communications reference architecture that uses SOA principles to integrate IBM software and hardware assets, along with partner components.

Service Products



IBM converged communications reference architecture
Supports data, voice, video and presence

*) Future Service

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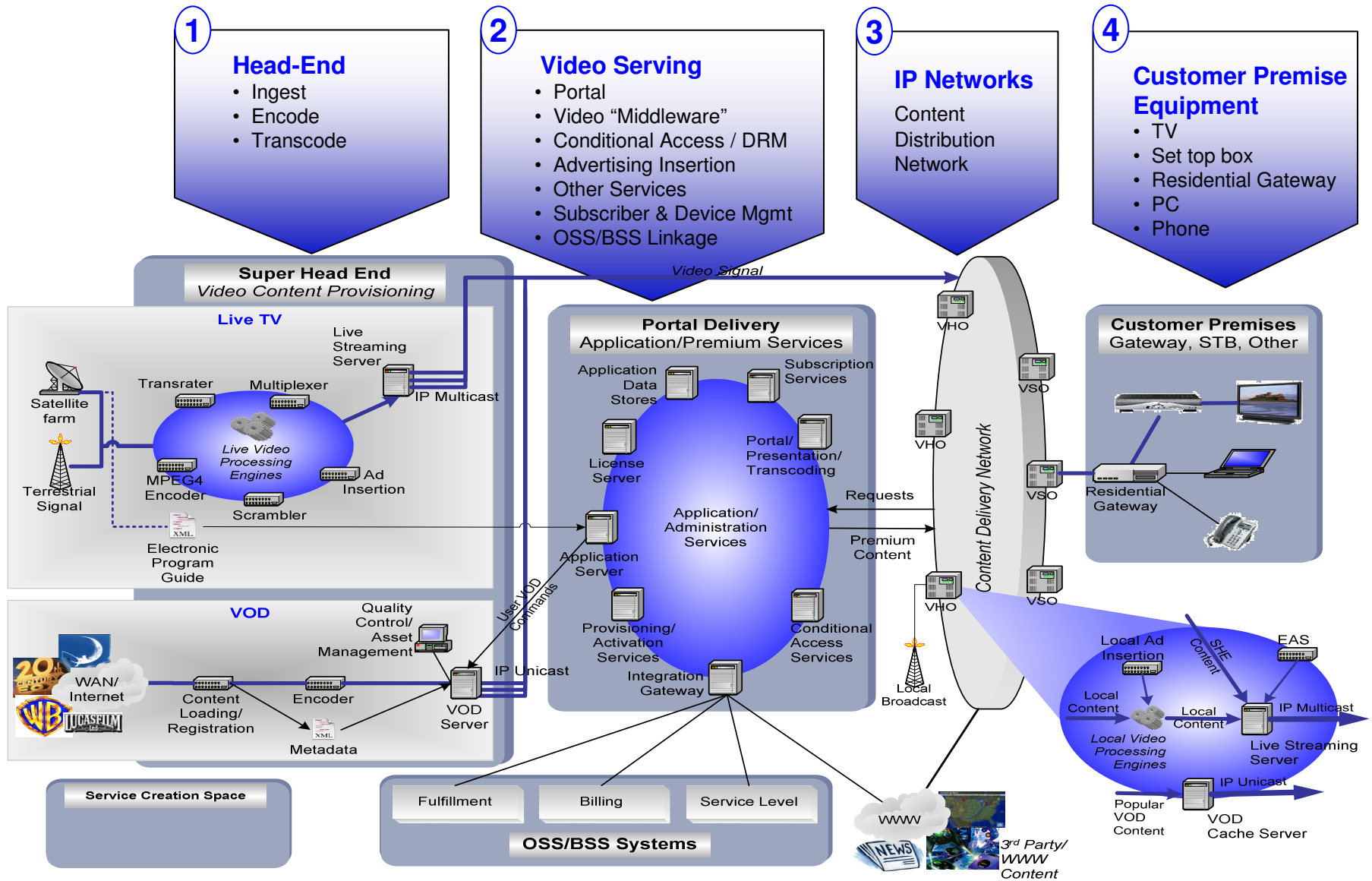
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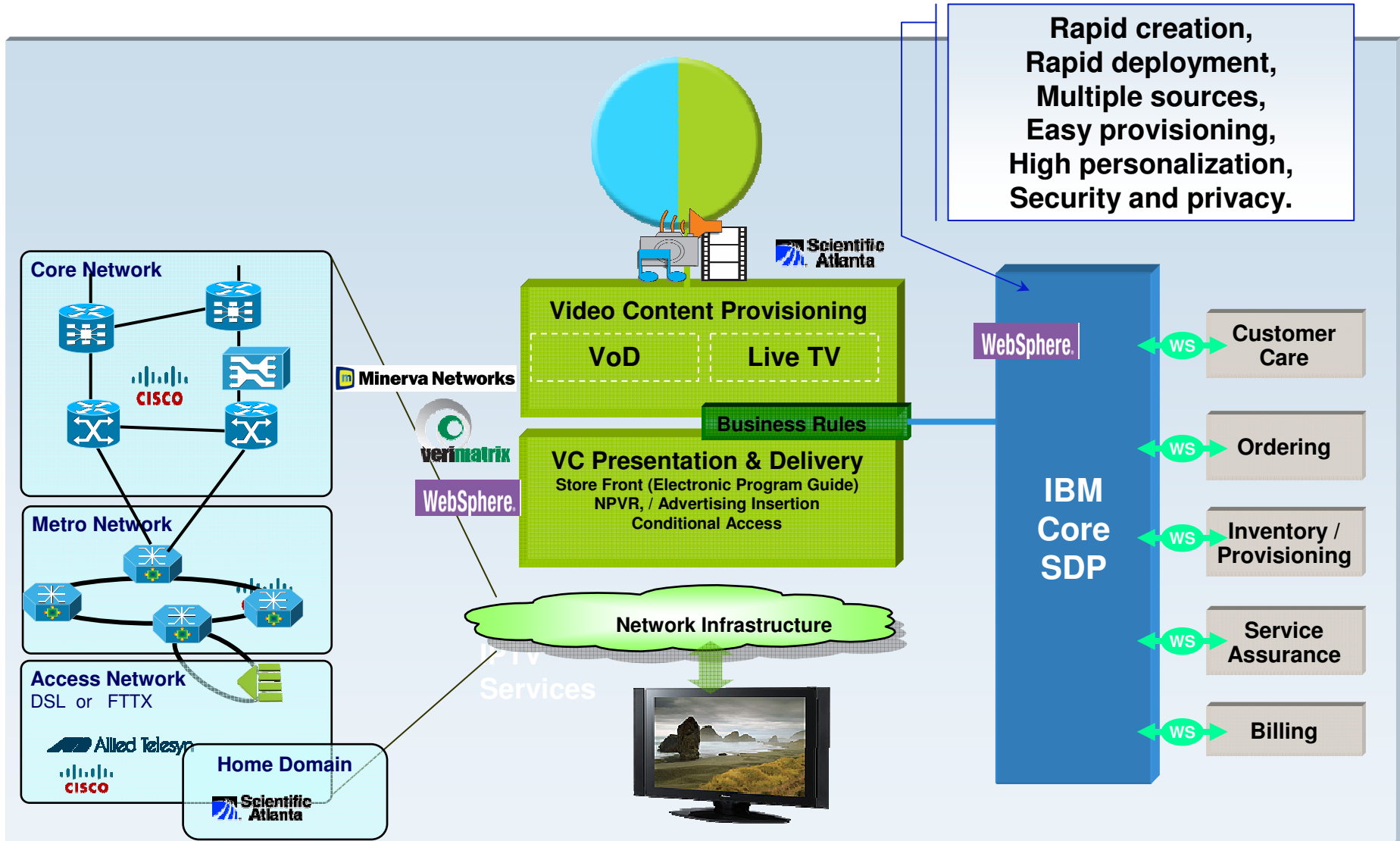
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IBM – CISCO E2E IPTV Solution Framework



IBM Core SDP Enables IPTV Infrastructure



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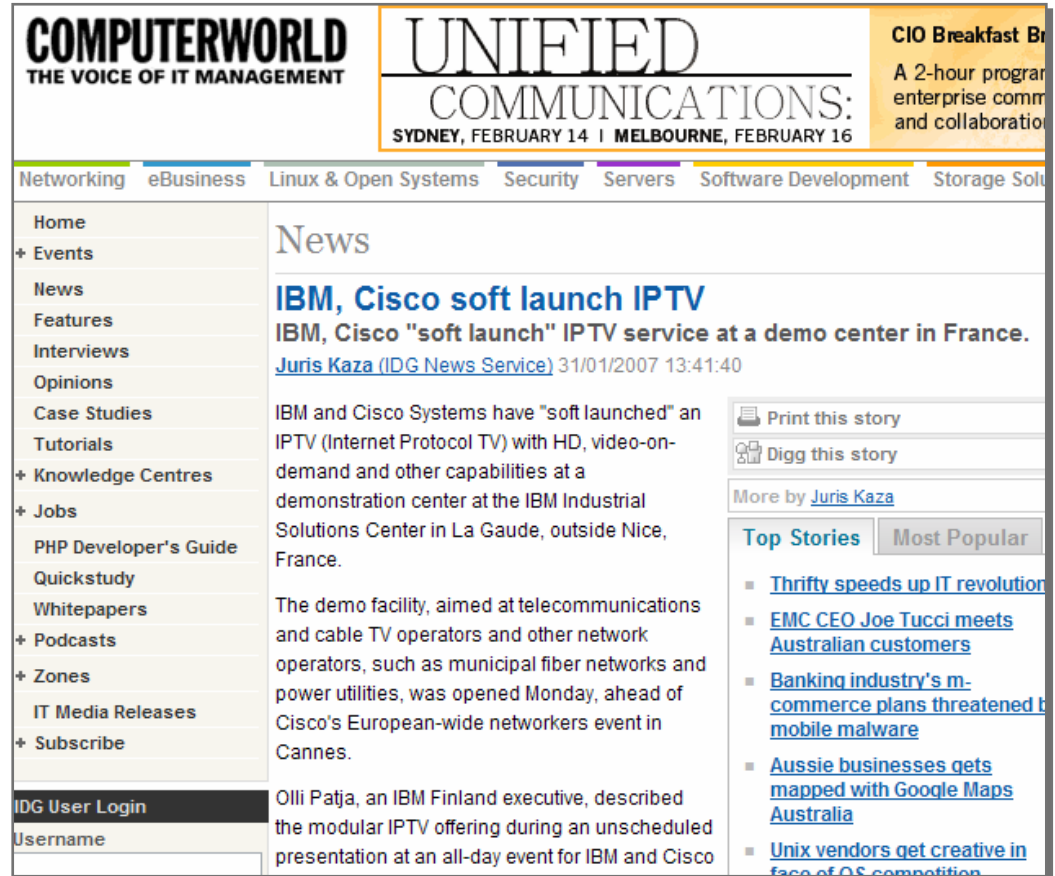
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IPTV Demonstration Center at La Gaude

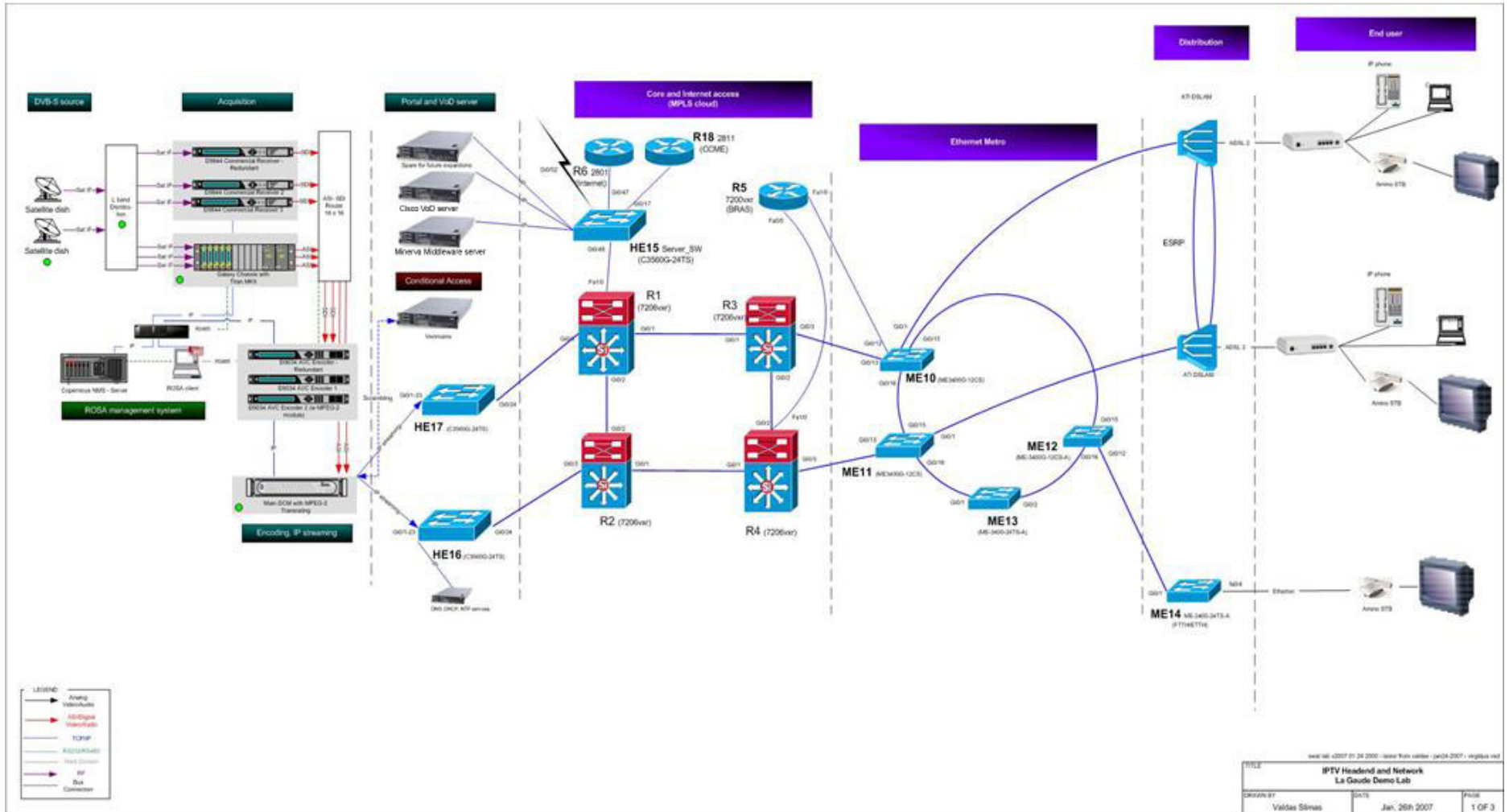
- IPTV Infrastructure Demonstration Center launched **January 29**
- Key milestone to demonstrate a preferred partnership, Cisco and IBM leaders participated
- Sales Strategy meeting, focus on Central and Eastern Europe and other Emerging Countries



The screenshot shows a news article on the Computerworld website. The main headline is "IBM, Cisco soft launch IPTV" with a sub-headline "IBM, Cisco 'soft launch' IPTV service at a demo center in France." The article text states: "IBM and Cisco Systems have 'soft launched' an IPTV (Internet Protocol TV) with HD, video-on-demand and other capabilities at a demonstration center at the IBM Industrial Solutions Center in La Gaude, outside Nice, France." The article is dated 31/01/2007 13:41:40 and is attributed to Juris Kaza. A sidebar on the right lists "Top Stories" including "Thrifty speeds up IT revolution", "EMC CEO Joe Tucci meets Australian customers", "Banking industry's m-commerce plans threatened by mobile malware", "Aussie businesses gets mapped with Google Maps Australia", and "Unix vendors get creative in face of OS competition".

Mentions in several publications: Infoworld, Networkworld, ITworld, Computerworld, etc

Overall Demo Set up



Equipment in the Demo Lab

3 TV sets connected via different access modes:

46" Full HD (High Definition) TV and 13 TV channels

- Set Top Box (STB) Connected via Ethernet to the home (ETTH)

37" Full HD TV and STB, 20 TV channels

- Residential Gateway (RG) connected via ADSL2+

32" HD Ready, SD (Standard Definition) STB, 8 TV channels

- RG connected via ADSL2+
- QinQ (VLAN tagged inside tagged VLAN)



- CISCO core and metro Network
- Allied Telesis access network
- CISCO company Scientific Atlanta Super Video Headend
- Minerva networks middleware
- Verimatrix Conditional Access Server
- IBM EPG

Equipment in the Demo Lab (now)

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Minerva Middleware to:

- Display 20 Live or broadcast TV channels (received directly from satellite)
- Show a simulated Electronic Program Guide (EPG)
- Select Video on Demand programs in Standard Definition (SD), MPEG2 and MPEG4 formats

The Demo Lab allows service providers to interact with the different system elements and simulate the real-life end-to-end triple-play solution

Select and watch various types of Broadcast TV channel

- SD, HD, MPEG2, MPEG4, etc.

Use of Middleware

- EPG (Electronic Program Guide)

Movies on Demand

Triple play

- Internet access
- VoIP

In the the Demo Lab it's possible to apply the different techniques to optimize network behavior and test business continuity

Network behavior

- **Multicast (for broadcast channels)**
- **Unicast (for Video On Demand programs)**
- **Quality of Service (different classes for Video, Voice and data)**
- **Channel zapping time**

Business Continuity (the content should always be available at the consumer's home)

- **Convergence time to preserve image quality at the consumer's home**
- **Three different scenario to be presented**
 - ISP fiber cut or element fault between two Core locations
 - ISP datacenter disaster
 - ISP fiber cut or element fault in the Metro area

Demo Lab: additional scenarios

- **CAS integration: TV Channel and Video on Demand encryption**
- **SNMP manager to display the network elements and link status**
- **Consumer's home: 2/3 STBs per single home (multi-room)**
- **Measuring tool: Video Probe (S-A)**
- **Simulation of link quality (packet loss, latency, jitter, etc.)**
- **DVR (Digital Video Recorder) with DVD burner**
- **Portable device integration**
- **Unified communication (callerID display, virtual voicemail, etc.) integration with the Set Top Box**
- **Super Head End: duplication of components to simulate full business continuity scenario**

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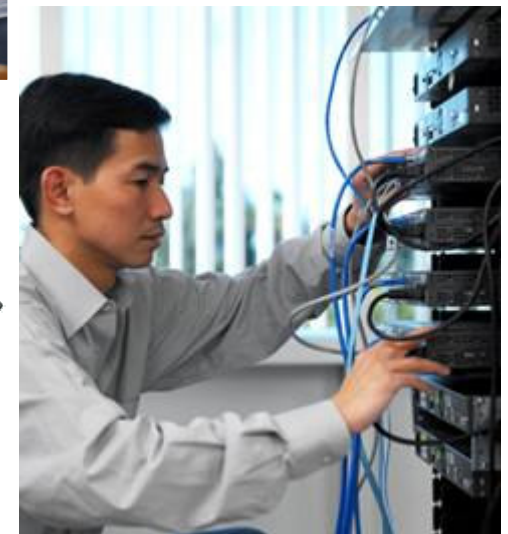
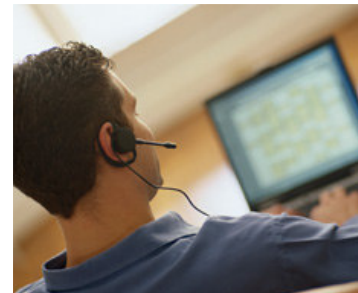
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Service product Description

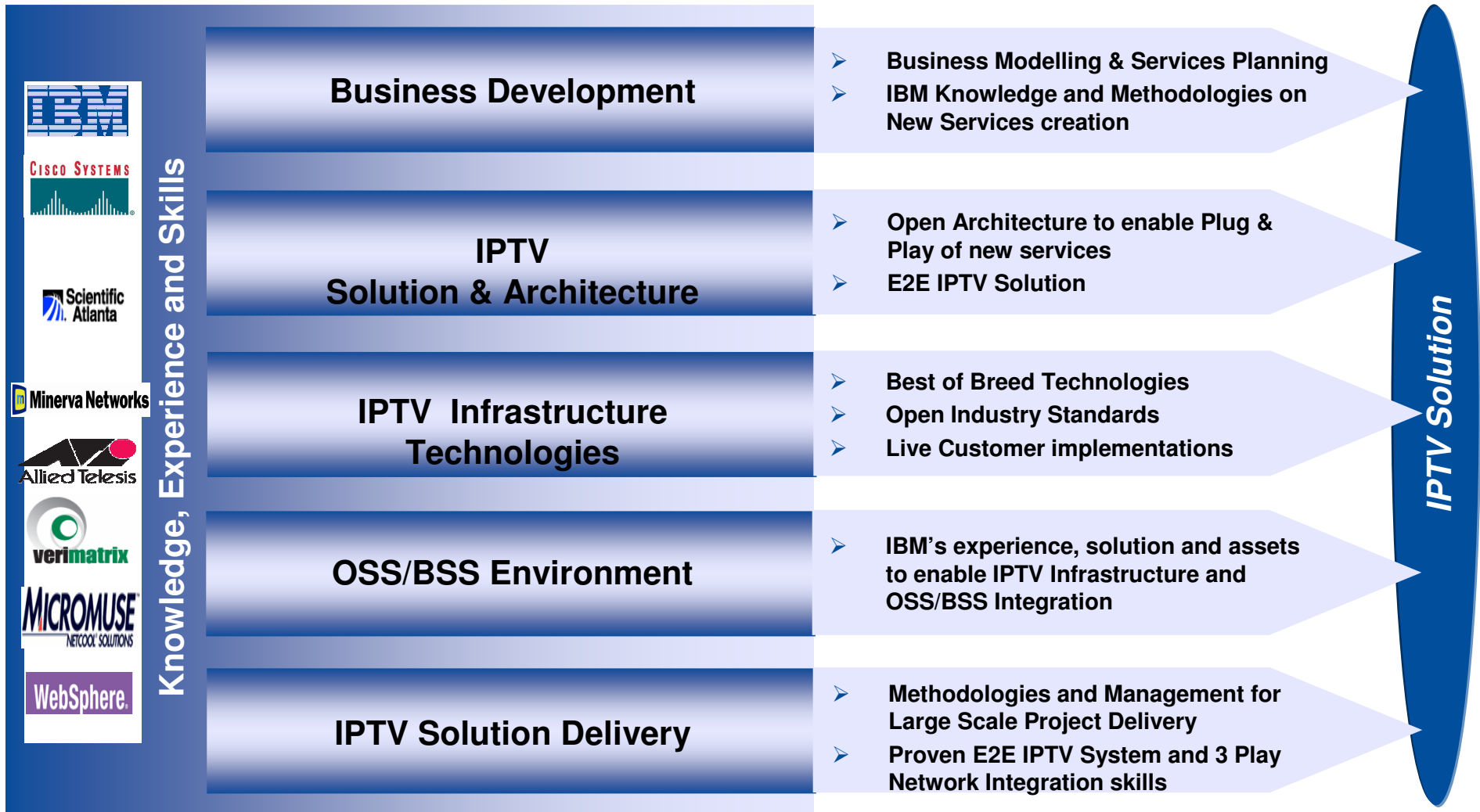
IPTV infrastructure solutions and services from IBM help Tier 2 and Tier 3 service providers and internet service providers (ISPs) to transform from traditional operator to dynamic and efficient triple play service provider, able to offer and deliver data, voice, TV and Video services, including broadcasting, and thus differentiate themselves from other traditional service providers.

Compared to the traditional TV broadcaster and CTV operator infrastructure, IBM IPTV infrastructure solutions and services are built on open ICT standards, consolidated broadcasting capable IP network, IT servers, storage, digital content management, best of breed processes and service provisioning solutions.

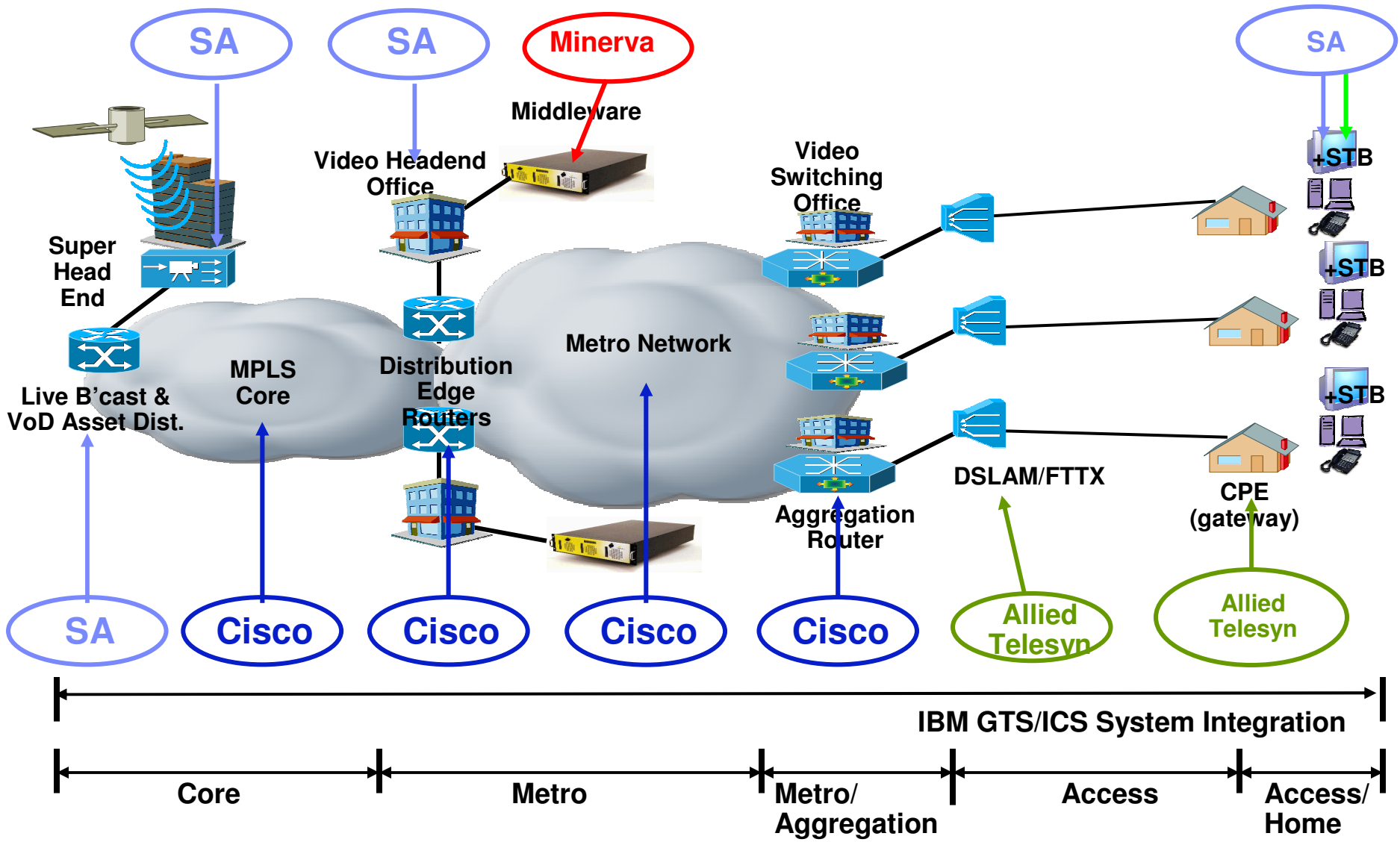
IPTV infrastructure solutions and services enable rapid new service implementation, provisioning and distribution of TV, Video and Games content and at same time provide more traditional internet and email services through a familiar end user interface: TV and set-top-boxes. All these give a strongly needed competitive edge for these players.



IBM – Cisco together with our Partners Deliver industry leading end to end IPTV solution



IPTV Partners



Thank
YOU

