Converged Networks, Mobile Applications, and Location Based Services

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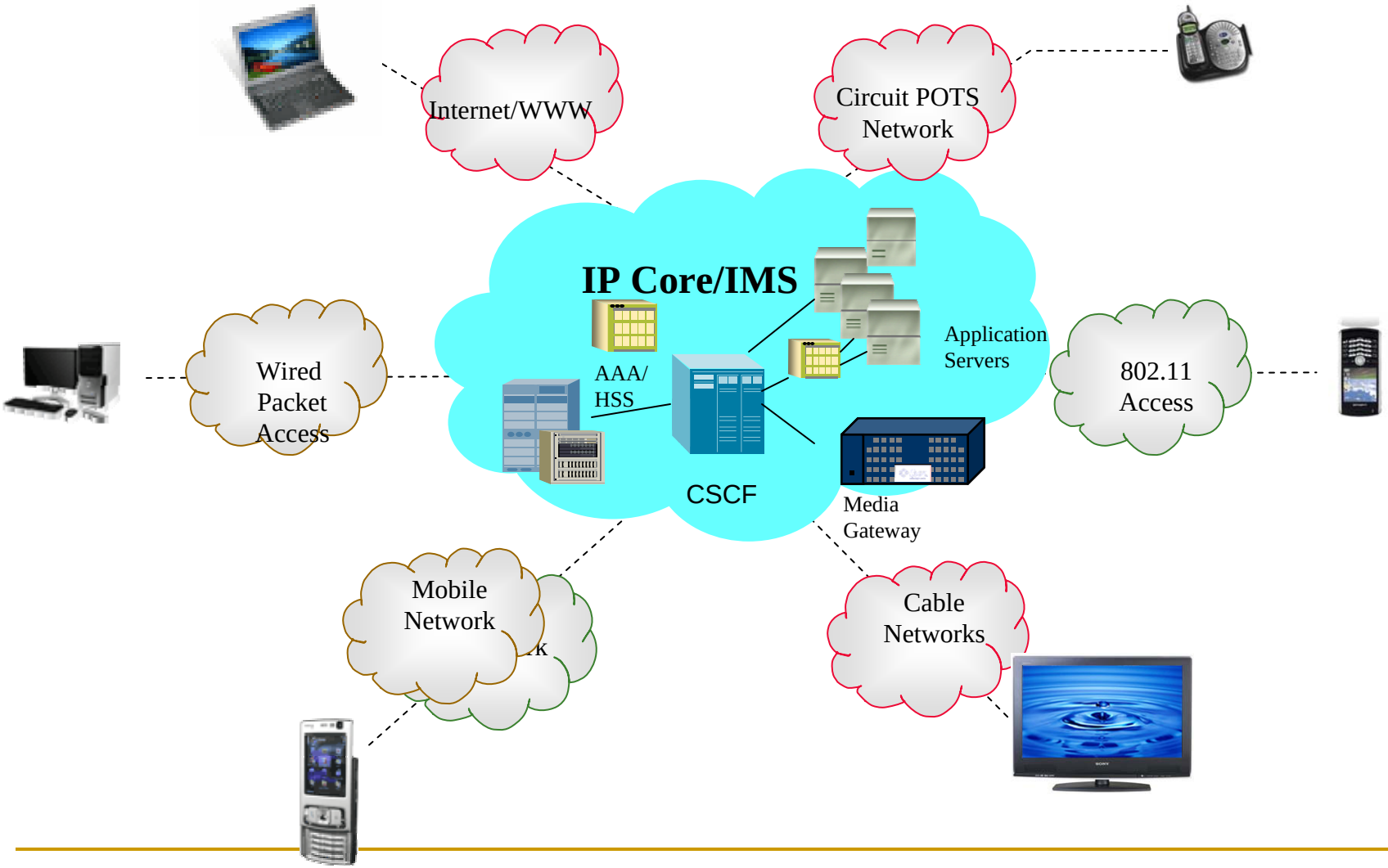
Converged Networks



Converged Networks Changes the World

For End Users:

•New ways of communication

•Productivity

•New lifestyle

For service providers:
•Level the playing field
•New service offering
•New revenue generated

For society:
•More connected
•More technology dependency
•Privacy, security, safety issues

For HW/SW vendors:
•Level the playing field
•Encourage new R&D
•New revenue generated

Converged Network Enablers

- 3G/4G wireless systems including handsets and infrastructures – high bandwidth, rich feature sets
- IP core and IP Multimedia Subsystem (IMS)
- Standardized protocol stacks
- Web service architecture

Mobile Applications

- Mobile applications for the most part overlap with wire-line applications in terms of functionality, except location based service applications
- Mobility makes them difficult to implement even the same application that work in fixed location environment – limitation of wireless systems
- Examples of mobile applications: VoIP, PTT, IM, multimedia conference calls, web browsing, web sharing, video streaming, video sharing, Mobile IPTV, location based services

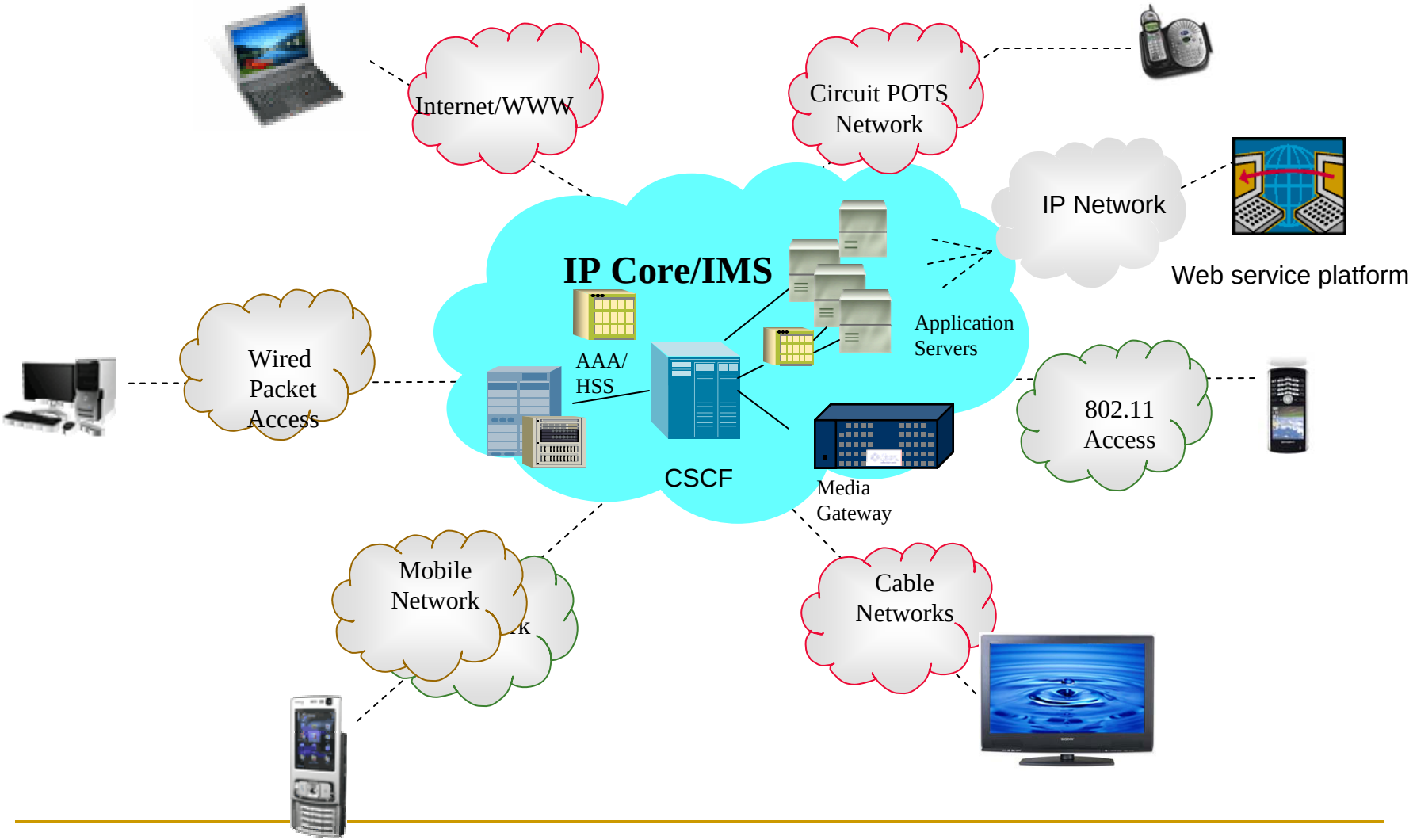
Mobile Application Enablers

- Handset OS and languages such as Windows Mobile, J2ME, XML, Symbrian, Brew
- Infrastructure platform and languages such as J2EE, C/C++, XCAP server, IM server, PTT server, conference server, streaming server, VoIP gateway, presence server, location servers, push server
- Web based service oriented architecture
- Protocol stacks: SIP, RTSP

Location Based Services (LBS)

- Examples of location based services: E911, navigation, family member finder, friend finder, pet finder, fleet management, location based advertisement, follow-me, location based gaming
- Technologies: handset based, network based, and hybrid
  - AGPS, AFLT, OTDOA, ECID
- Infrastructure platform: PDE/SMLC, MPC/GMLC, LMU
- Architecture: Control plane and Secure user plane (SUPL) that is IP based

Converged Networks And Web Service Architecture



Converged Networks and Web Service Architecture Is Good for Applications And LBS

- Applications work seamlessly across different networks
- Richer set of applications, e.g., adding presence to communication methods
- Open architecture encourages application development
  - Take advantage of Internet/WWW development environment
  - And web service architecture
- Standardized IP based protocols allows interoperability
- Ease of development
- QoS and security are challenging