

Multiple Protocol Stacks and CPEs

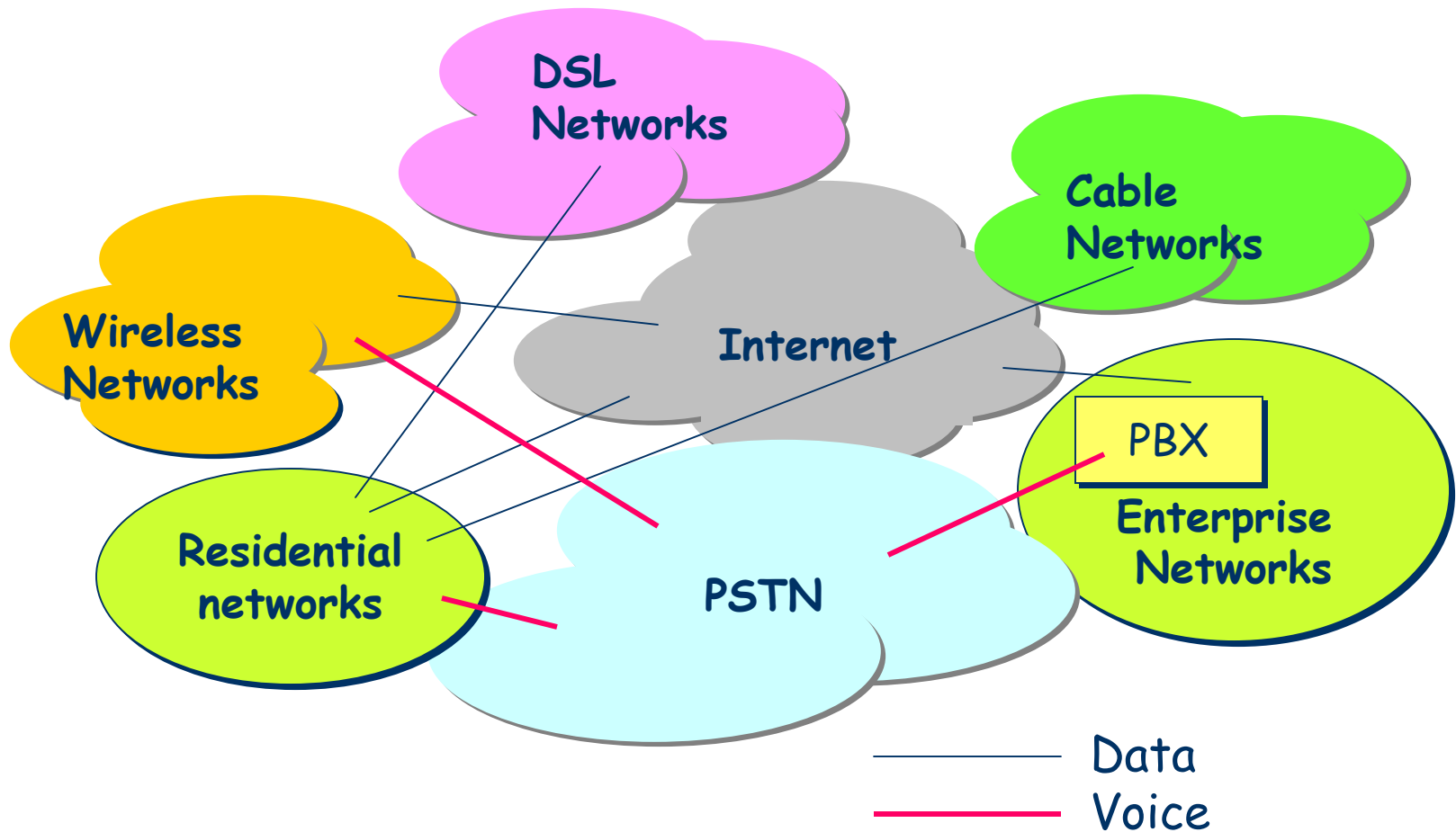
ipDialog, Inc.
1762 Technology Drive Suite 124
San Jose CA 95110-1307 USA

Phone (408) 451-1430
Fax (408) 451-1440
URL www.ipdialog.com

Joon Maeng

jmaeng@ipdialog.com

Voice and Internet Infrastructure



VoIP for Enterprises



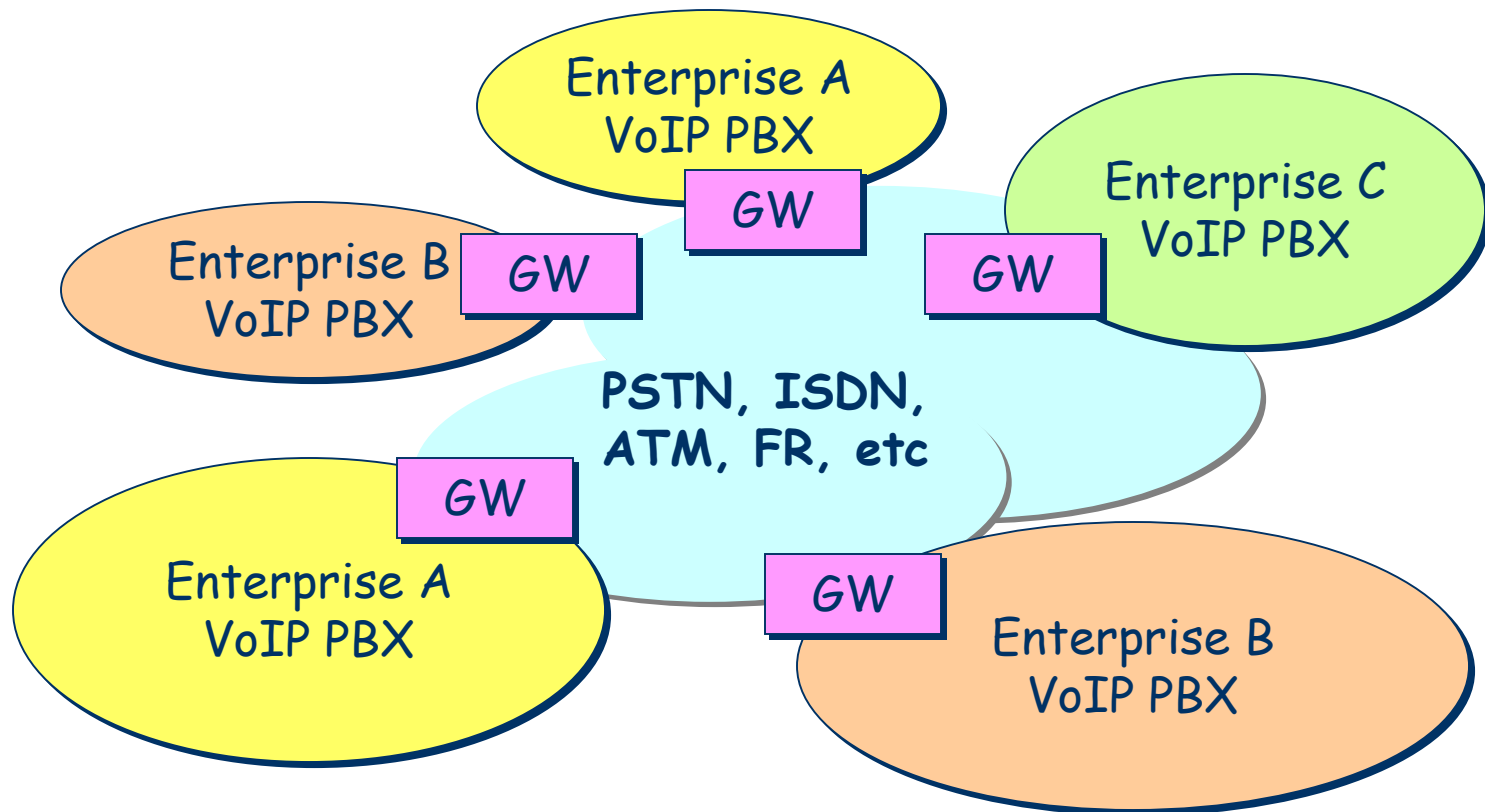
- Most enterprises have legacy PBXes and some use Centrex services
- Legacy PBXes are proprietary devices
- Enterprises would be hesitant to use service providers to manage VoIP in the convergence network due to security issues
- It is highly likely that enterprises will maintain the isolation between internal VoIP networks and public networks via firewalls
- Enterprises will deploy IP PBXes

VoIP for Enterprises (Cont'd)

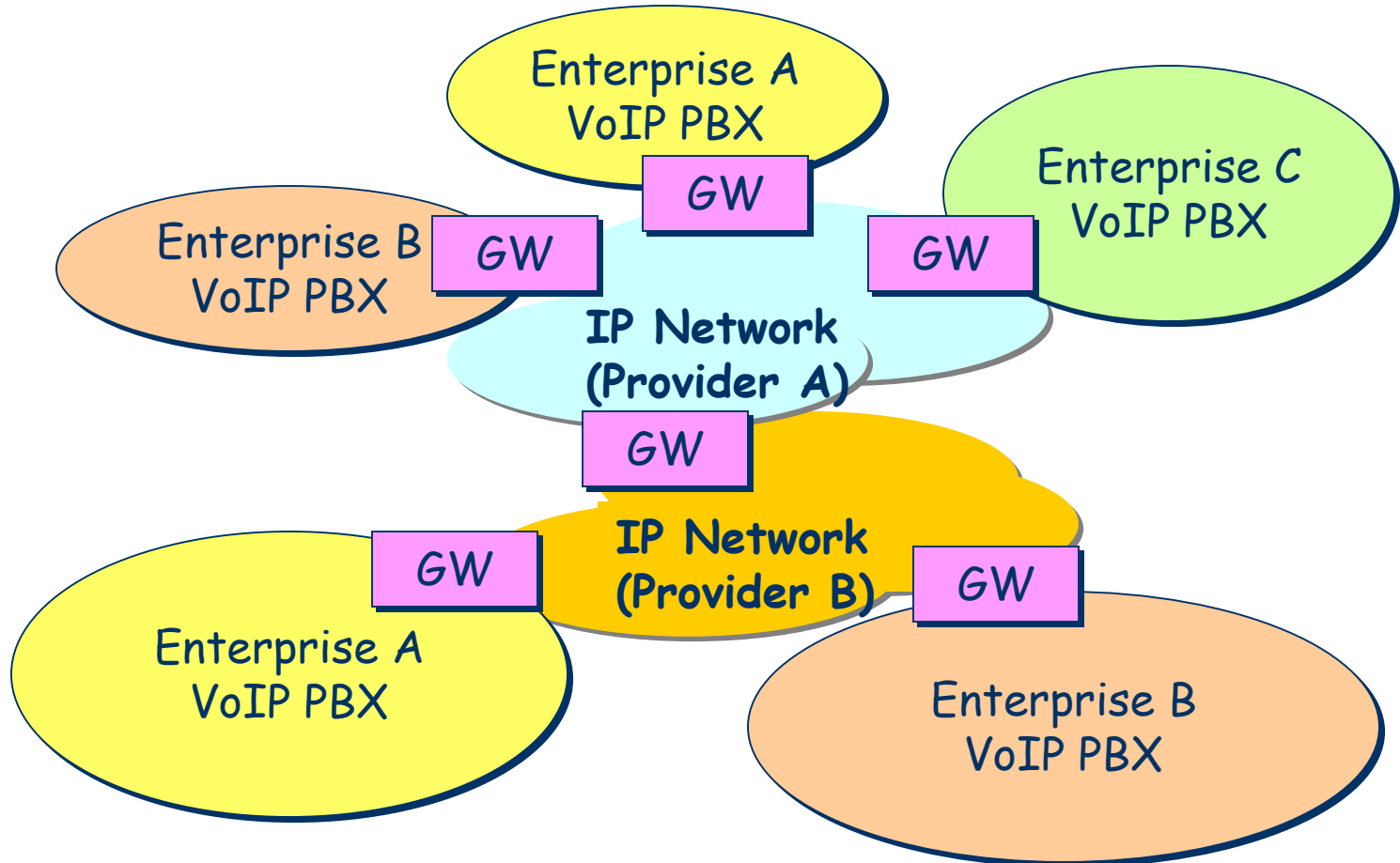


- Enterprise IP PBXes have to work with legacy PBXes
- Existing IP PBXes are mostly proprietary
- IP PBX vendors may continue to manufacture proprietary PBXes or partially standard-compliant IP PBXes
- The end results, enterprises will likely to deploy proprietary or partially standard-compliant IP PBXes

Islands of VoIP PBX Networks (with Circuit Switches Backbone)



Islands of VoIP PBX Networks (with IP Backbones)



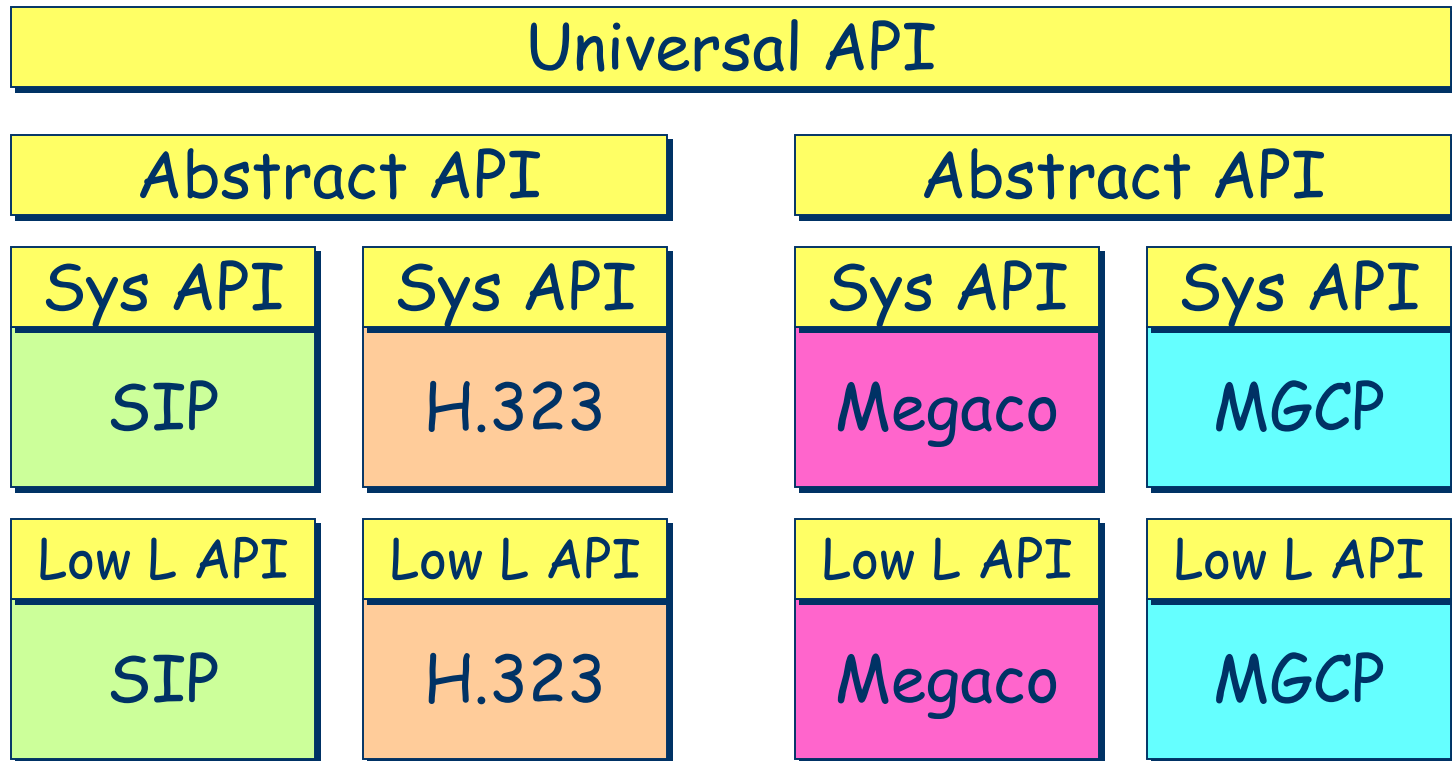
Homogeneous E2E VoIP?

- Islands of VoIP protocols
 - Many VoIP standards: SIP, H.323, Megaco and MGCP
 - Proprietary IP PBXes
- In near future, PSTN will be used to bridge VoIP networks with different protocols
- Many different types of gateways will be needed to bridge VoIP networks

How to deal with multiple protocols?

- Protocol gateways
 - IP to PSTN, ATM, ISDN, FR gateways
 - VoIP protocol gateways
- Protocol servers with multiple protocols
 - Softswitch, Multiple protocol IP PBX
 - SIP proxy + H.323 GK
- Endpoints with multiple protocol support

ipDialog Protocol Stacks with Uniform API



Advantages of Uniform APIs

- Integrators can minimize time-to-market in introducing products with different protocols
- Integrators can reuse application software (e.g., The application software for SIP CPE is the same as H.323 CPE)
- Easy to build gateways, IADs, and Softswitches with two or more protocols

ipDialog Endpoints with Multiple Protocols

- Small footprint VoIP OEM CPE
- Currently SIP, H.323, Megaco or MGCP phones
- Very affordable phones with full functions
- CPEs with multiple protocols will be released
- Enables mobility between different protocols. Useful for home users and mobile networks