



Centrality IP Phone Solution

-- Low Cost VoIP Terminal Solution

Email: support@aredfox.com

Tel: 86-10-82378008

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Centrality Communications, Inc.



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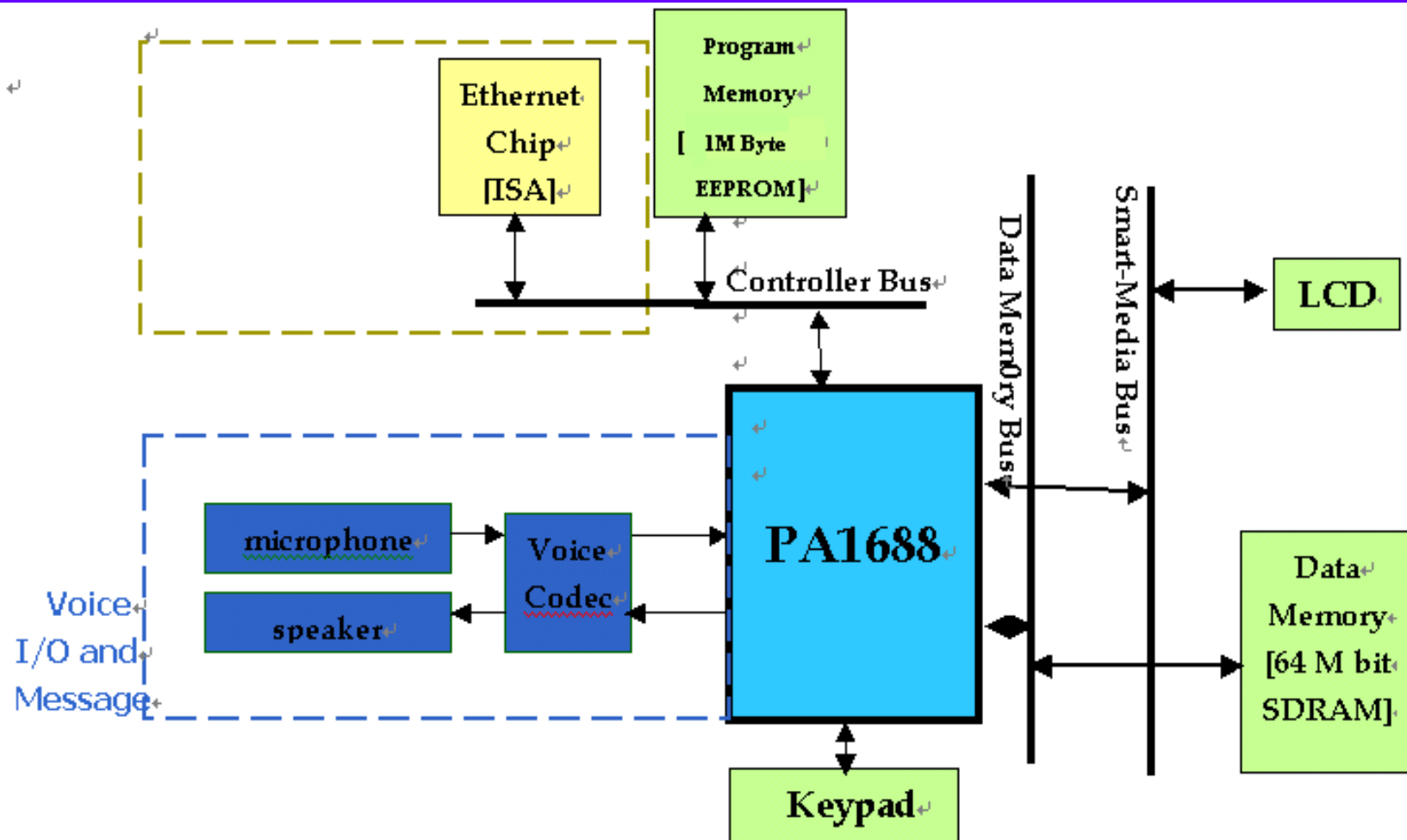
- ◆ Founded in 1999
- ◆ Located in Santa Clara, CA ,USA.
- ◆ Professional System On Chip Vendor
- ◆ Low Cost Integrated Solution
- ◆ Providing Innovative Integrated Solutions For Handheld and Communication Devices
- ◆ Innovative Solutions: IP Phone/ VoIP Gateway
GPS/PDA
DSC/MP3/DVR/PIM



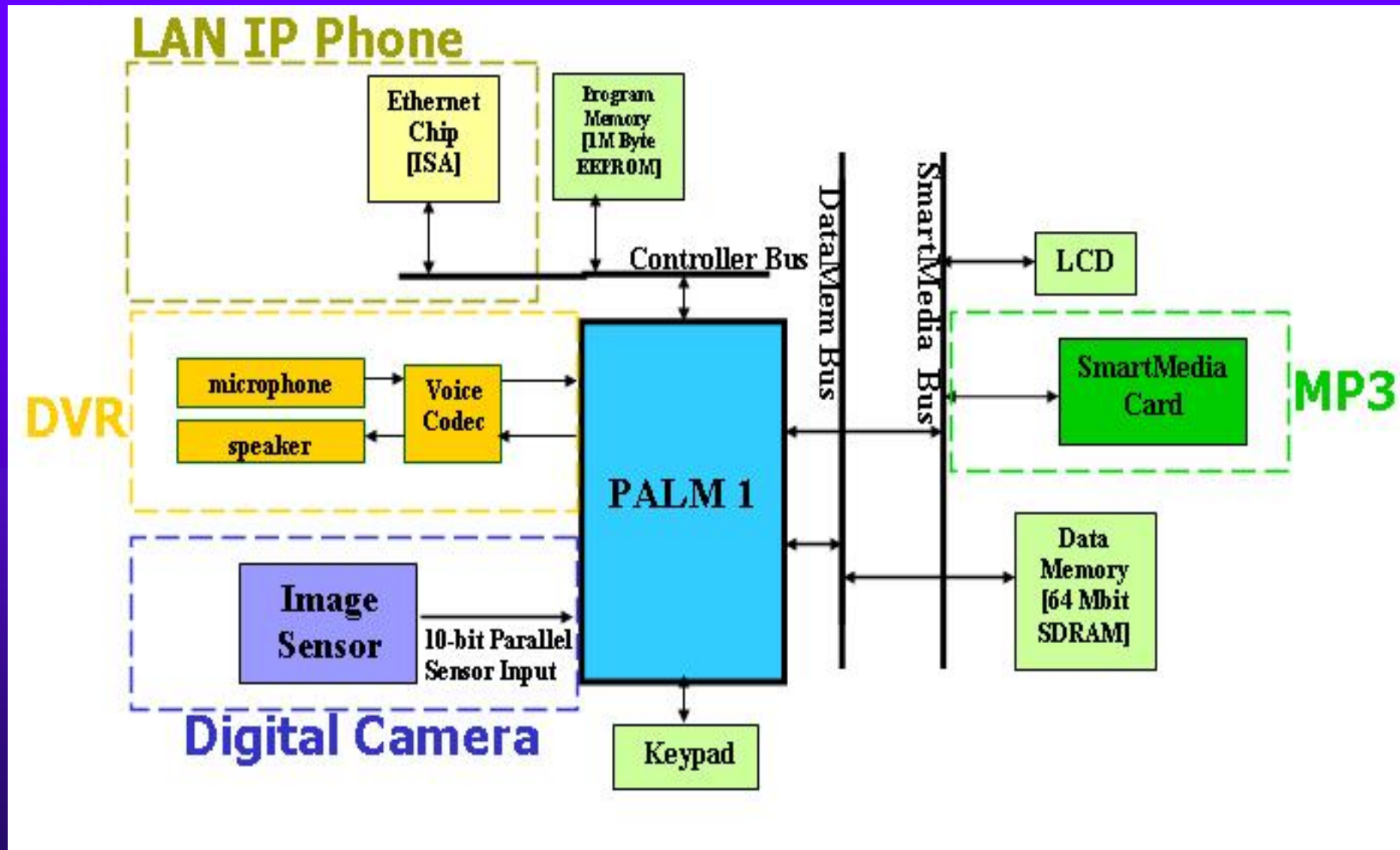
Centrality IP Phone Solution

- ◆ Low Cost Solution for VoIP Terminal
- ◆ Based on Centrality SOC: PA1688
- ◆ Straight-forward User Customization Based on Changing Needs
- ◆ Installed Anywhere on a Corporate Local or Wide Area IP Network

Centrality IP Phone Architecture



PA1688 Centrality IP phone Expanding Architecture



Centrality IP Phone Features

- ◆ H.323, MGCP, SIP and Net2phone
- ◆ G.711, G.723.1 (5.3k/6.3k), G.729, G.729a, G.729b, G.729ab, GSM6.10
- ◆ IEEE 802.3
- ◆ DTMF/Call Progress Tone Detection & Generation
- ◆ DHCP and PPPoE
- ◆ TCP/IP, RTP, TFTP, FTP, Telnet, Web browser
- ◆ Programmable Echo Suppression
- ◆ VAD / Comfortable Noise Generation
- ◆ Adaptive Buffer for optimal delay and packet loss control

Demo Centrality IP Phone



**PA168B/C/E/F/FS/FB
IP phone without LCD**

**PA168F/FS/FB/S IP
phone with LCD**





Challenges to IP Phone

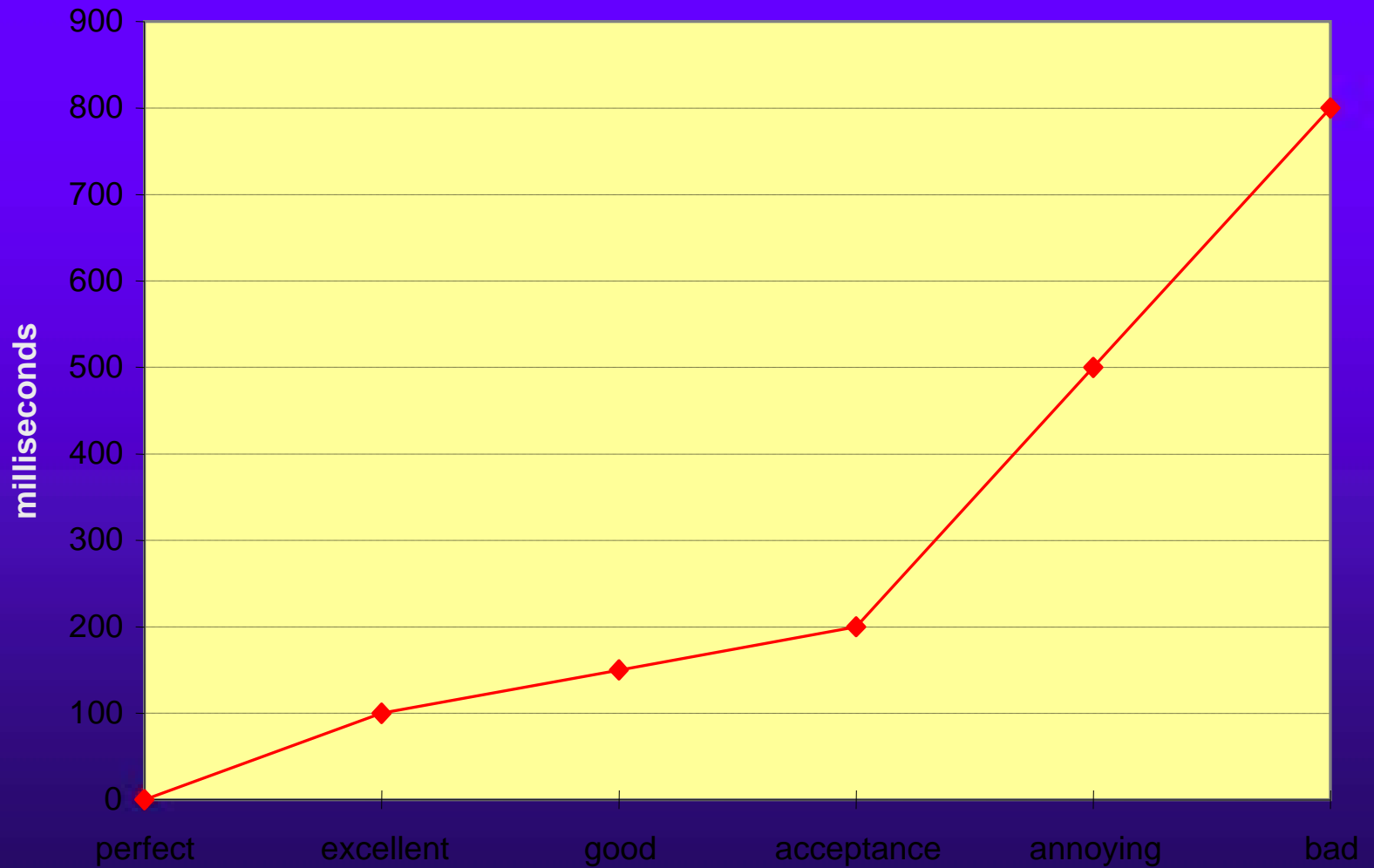
- ◆ Voice Quality
 - ◆ QoS
- ◆ Compatibility
 - ◆ Cost



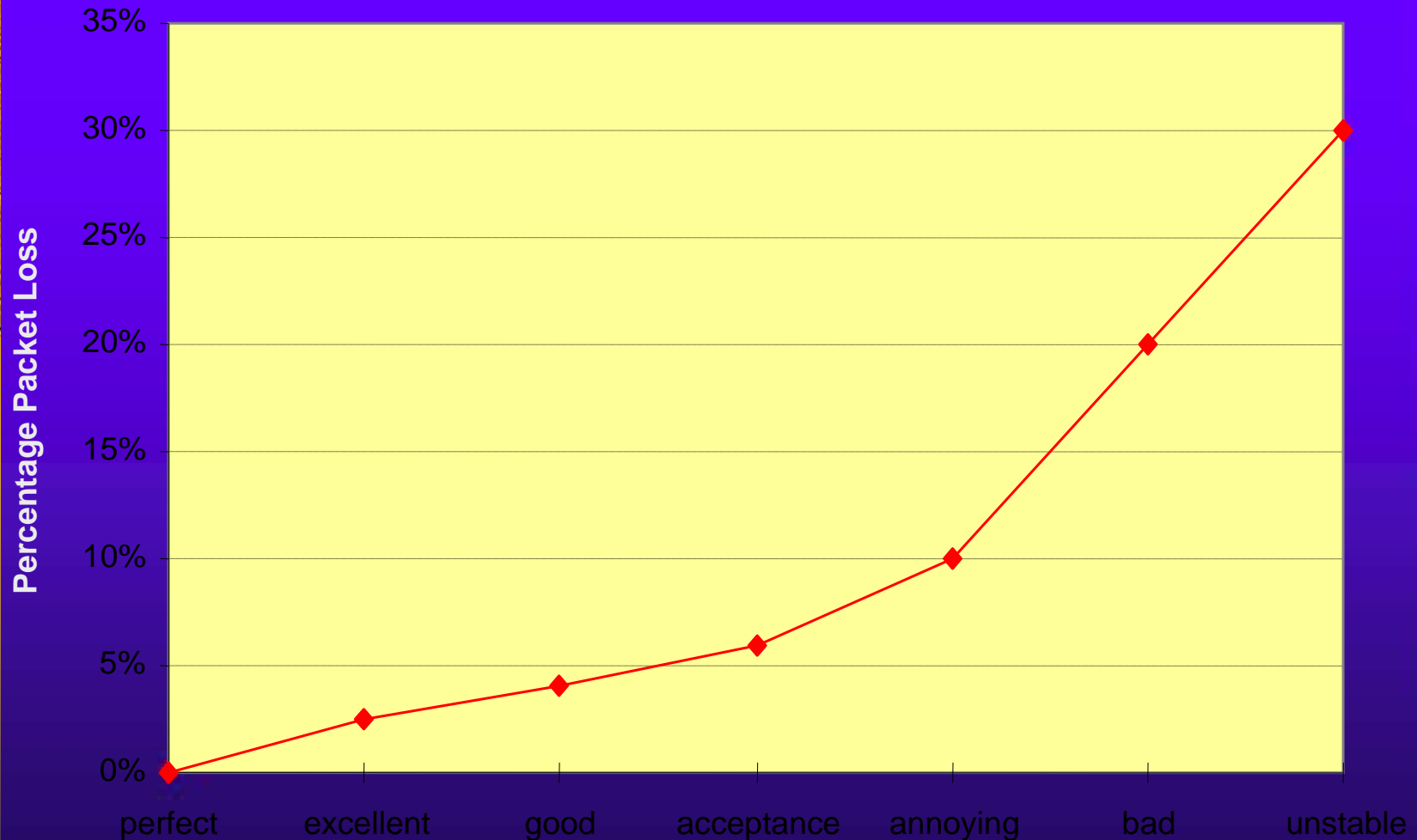
Voice Quality/QoS

- ◆ Voice Quality is dependent on latency, jitter and packet loss
 - as well as the acoustics/performance of the phone
- ◆ Quality of Service is controlled primarily through
 - Prioritization of voice
 - LAN topology
 - tolerance and techniques built into designs

Latency Impact on Voice Quality



“Packet Loss” impact on Voice Quality





Centrality IP Phone QoS Solved

- ◆ Echo Cancellation
- ◆ Low network jitter
- ◆ VoIP packet prioritisation
- ◆ Adaptive Buffer For Optimal Delay & Packet Loss Control
- ◆ Lost Packet Concealment
- ◆ Silence Suppression with comfortable noise generation
- ◆ Voice Compression: G.711, G.723.1 & G.729, G.729a, G.729b, G.729ab and GSM6.10



Centrality IP Phone Excellent Compatibility

- ◆ H.323
- ◆ SIP RFC2543
- ◆ MGCP RFC2705
- ◆ Net2phone Private System



Low Cost VoIP Terminal Solution

- ◆ PA1688 die size is the smallest due to advanced architecture
- ◆ PA1688's 160 pin PQFP cost less
- ◆ PA1688 is highly integrated so that very few external components are required
- ◆ Centrality IP phone solution requires only 2 layer PCB
- ◆ All DSP firmware and Protocol stack are developed by Centrality so there is no extra software charge (G.723.1 and G729 license fee are not included)

Equivalent IP Phone Solutions

◆ Cisco IP Phone

7910 (Basic-feature)



◆ USD\$295.00

◆ Cisco IP Phone

7960 (Full-featured)



◆ USD\$461.00

◆ Nortel IP Phone

i2002 (Economical Entry Level)



◆ USD\$240.00

◆ Nortel IP Phone

i2004 (Professional Level)



◆ USD\$420.00



Centrality Ethernet IP Phone Application Areas

- ◆ Integrated Access Applications
(Data/Voice/Video)
- ◆ Enterprise
- ◆ Branch Office
- ◆ Campus
- ◆ Broadband Apartments



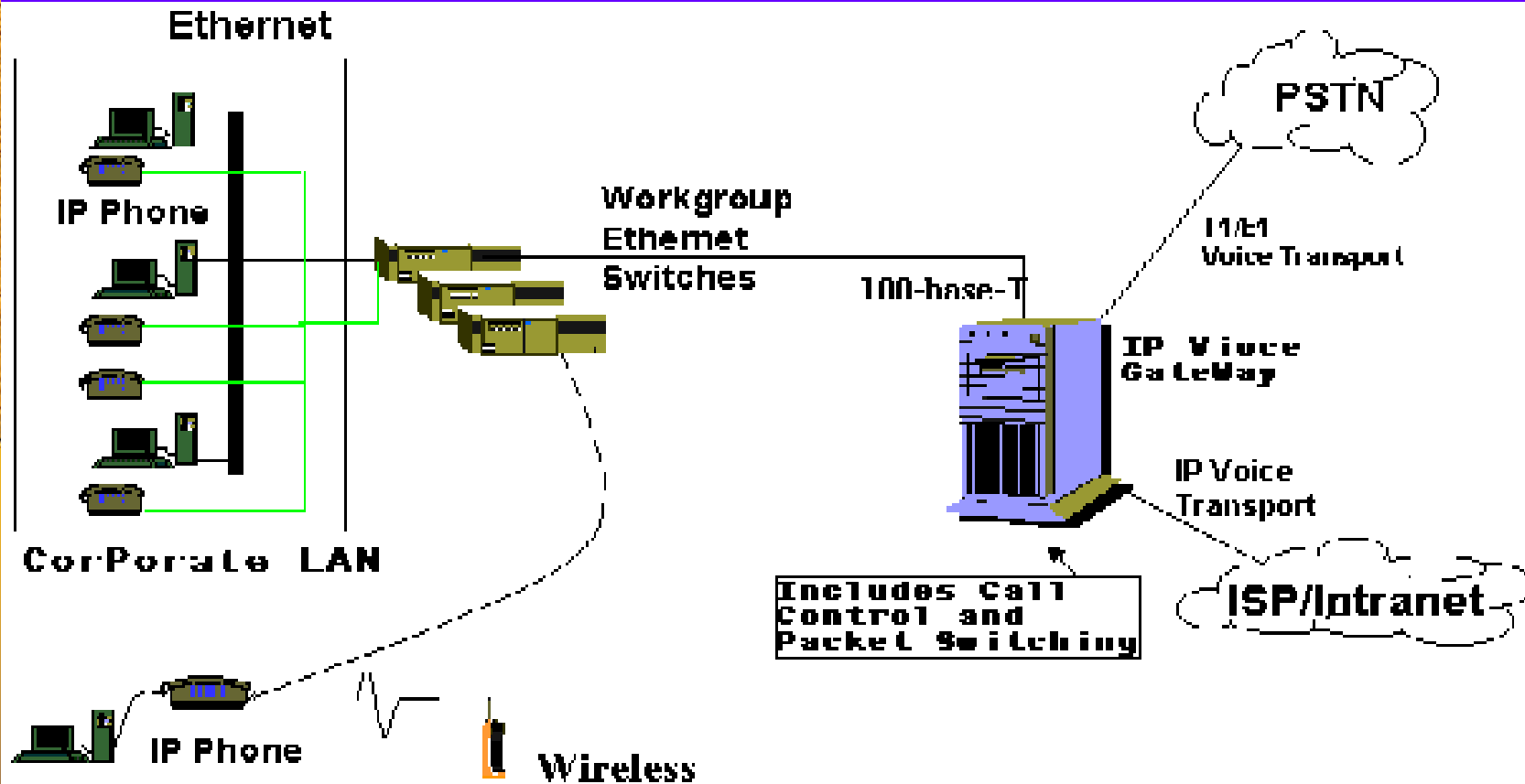
Integrated Access Applications (Data/Voice/Video)

- ◆ Cable Network(Cable Modem): Centrality IP Phone(Voice) +Internet(Data)+TV(Video)
- ◆ DSL Network(DSL Modem): Centrality IP Phone(Voice) +Internet(Data)
- ◆ Broadband Ethernet Network(LAN): Centrality IP Phone(Voice) +Internet(Data)

Centrality Bring Us into Everything-over-IP!

Centrality IP Telephony solutions are scalable, distributed and highly available, providing a smooth migration from separate infrastructures to a single converged voice, video and data network

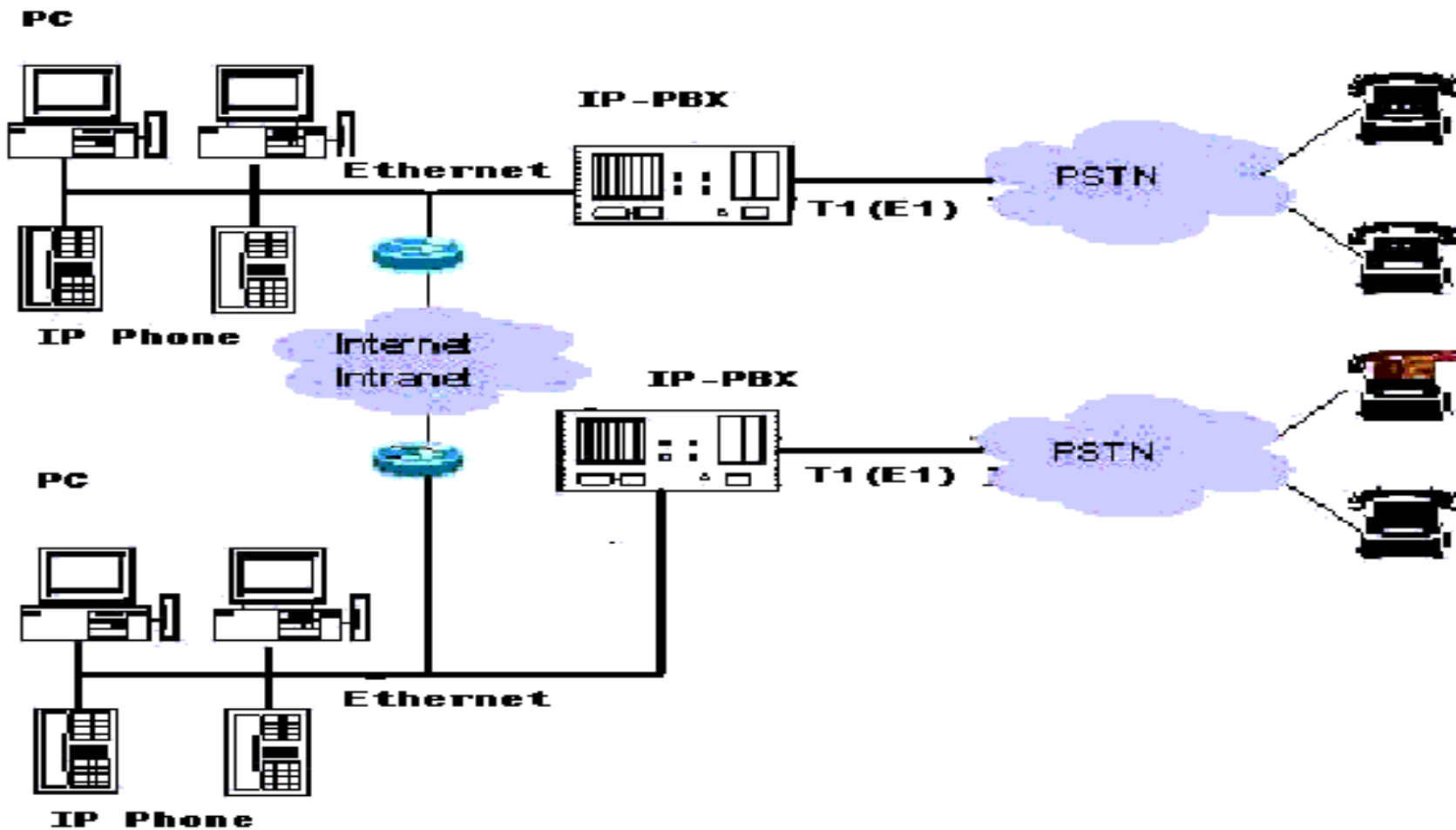
VoIP Solution for Enterprise Network Based on Centrality IP Phone solution



Available to Large Enterprise such as Business Bank, Securities Company, Power System Company, Insurance Agent & Etc.

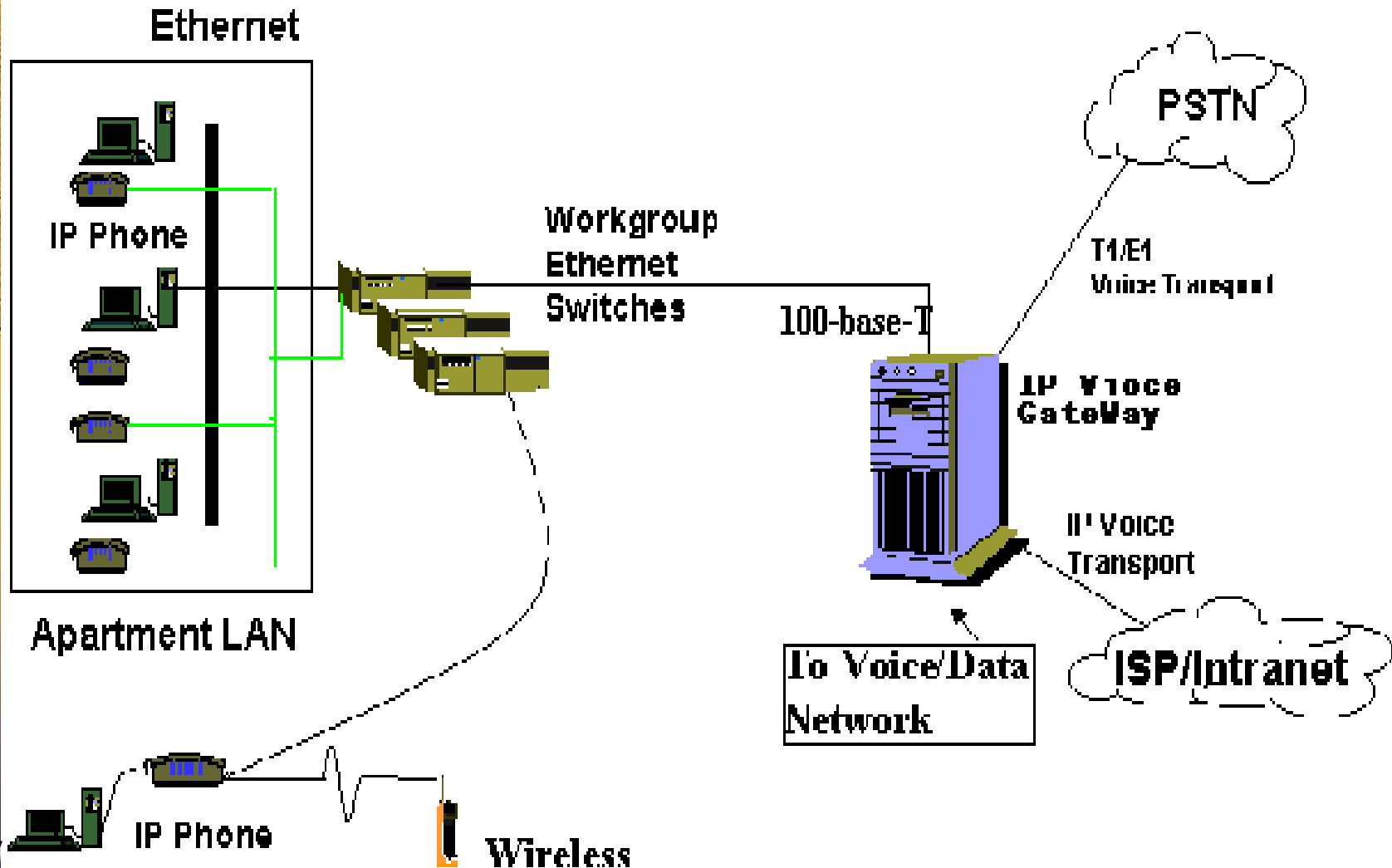
IP based systems and equipment have a huge installed base in,
and the potential cost saving could be massive

VoIP Solution for Branch Office Based on Centrality IP Phone solution

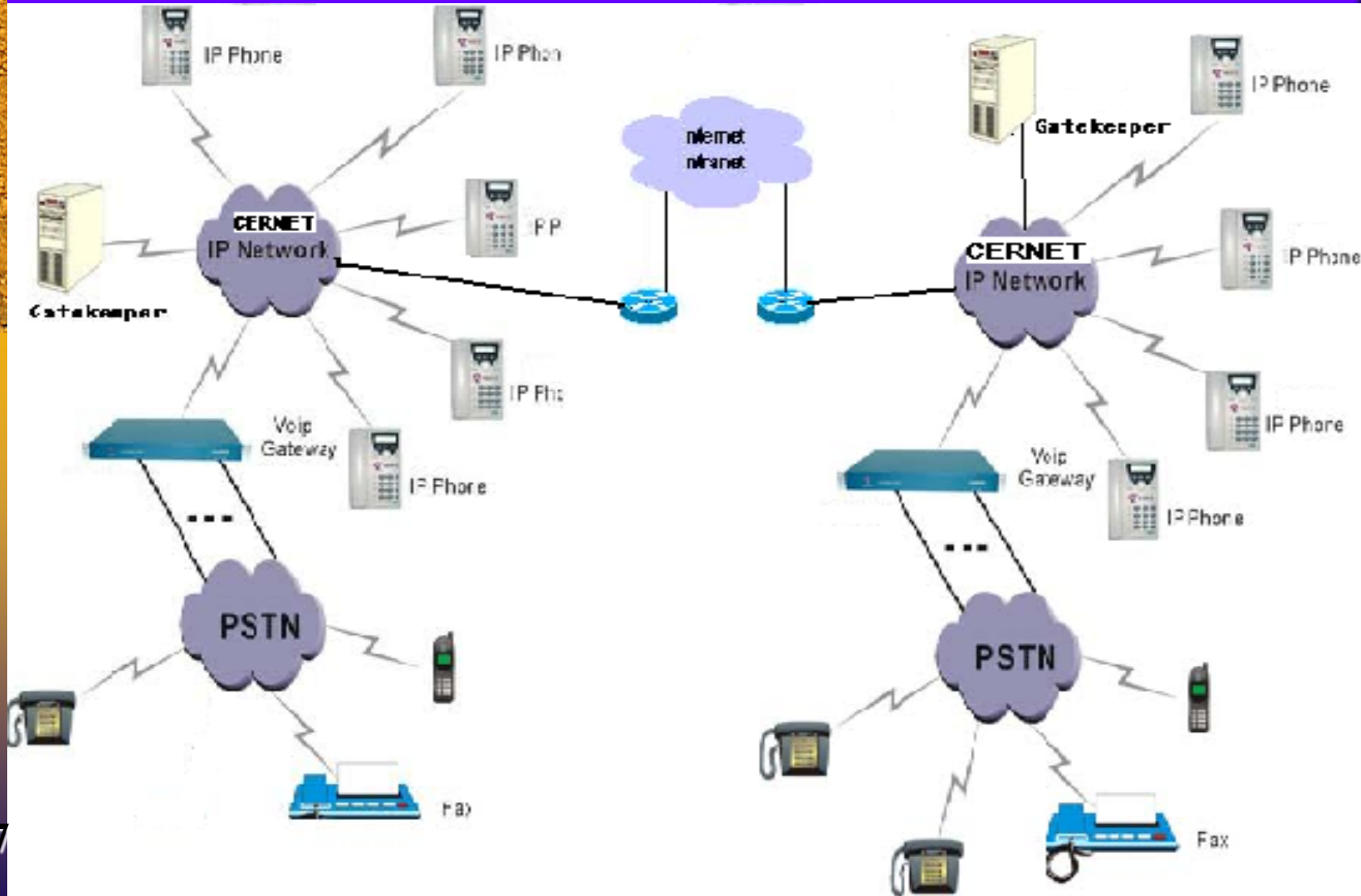


Available to the Syndicate Have Many Mbranch Offices such as
Legend,Haier,Digital China,
Founder GreatWall,LandChao,Hisense,TCL,Konka & Etc.

VoIP Solution of Apartment with Broadband Access Based on Centrality IP Phone solution



Centrality IP Phone Campus Application Based on CerNet





Centrality IP Phone Evaluation Design Kit

- ◆ First order should be at least 2K (no other license fee)
- ◆ 2 Centrality IP Phone Demo Sets
- ◆ Hardware Design Kit(PCB file, Gerber file, BOM, Schematic, Data sheet, Application Note, Layout Guide)
- ◆ Firmware Update
- ◆ Centrality IP Phone Solution API
- ◆ Centrality IP Phone utilities and application software,
- ◆ Centrality Development & Diagnosis Tools
- ◆ Assign Technical Support Window

Thanks!

- ◆ For more detail information, please contact:

Centrality Santa Clara

2520 Mission College Blvd. Suite 103 Santa Clara, CA 95035 U.S.A.

TEL:+1-(408)450-6314

Fax :+1-(408)450-6311

IP Phone:104506314

Email: voip@centralitycomm.com

Centrality Beijing

Room A2, 6th floor, bldg.B Tsinghua Tongfang Technology Plaza, No.1 Wangzhuang Road, Haidian District,Beijing

TEL:+86-10-82378008

Fax :+86-10-82378009

IP Phone:182378008; 182378009

Email: support@aredfox.com

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