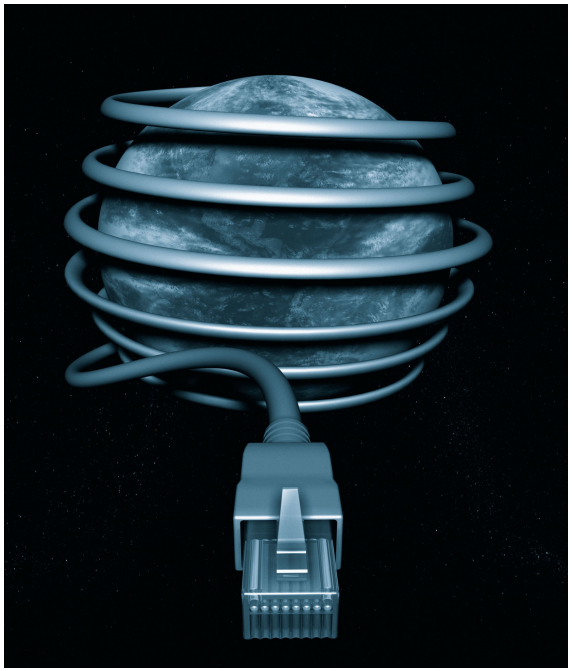
Next Generation
IP based Broadcasting System



AddPac Technology

AddPac Technology Proprietary

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- Next Generation IP Broadcasting System?
- NG-IBS Design Feature
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- NG-IBS Network Diagram
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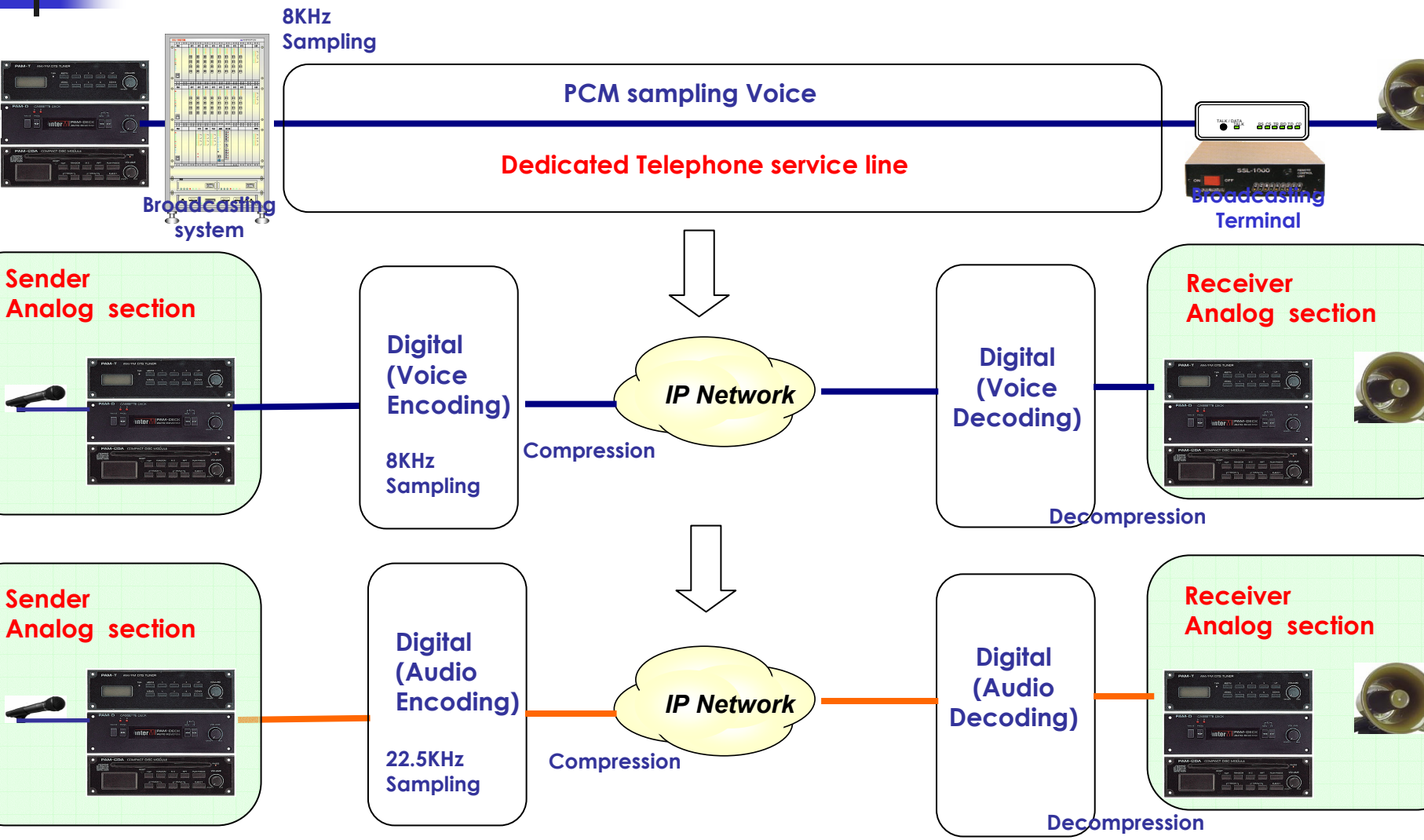
Next Generation IP Broadcasting System (NG-IBS) ?

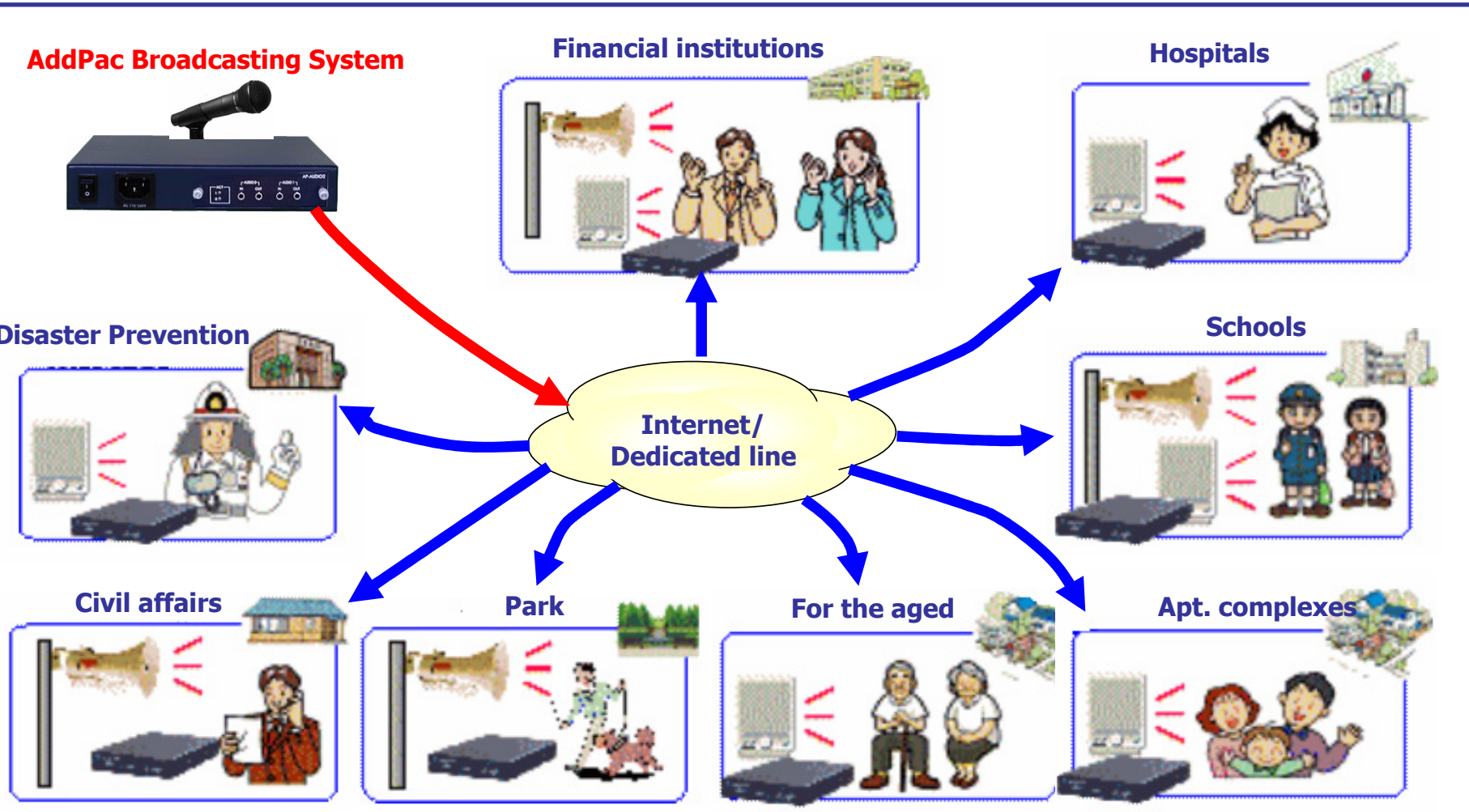
Next Generation IP Broadcasting

- **Beyond the existing broadcasting system**
  - Realizing high quality broadcasting (From Voice level to audio level)
  - Utilizing reasonable IP network, replacing expensive voice-dedicated line
  - Eliminating Integration & Management difficulties
- **Expanded Bandwidth and Various Contents**
  - ADSL→ VDSL → FTTH
  - Doubled bandwidth in one year
  - Internet arena asking for more than PC contents
- **To meet NGN arena based on IP network**
  - Intelligent communication system
  - Modularized, flexible architecture, adoptable to rapidly changing network environment
  - Reliable and stable system -"Full embedded system"
- **IP Broadcasting is the future of telephony service**
  - The quality of telephony service will be upgraded in the future.

IP Broadcasting vs. TD Broadcasting

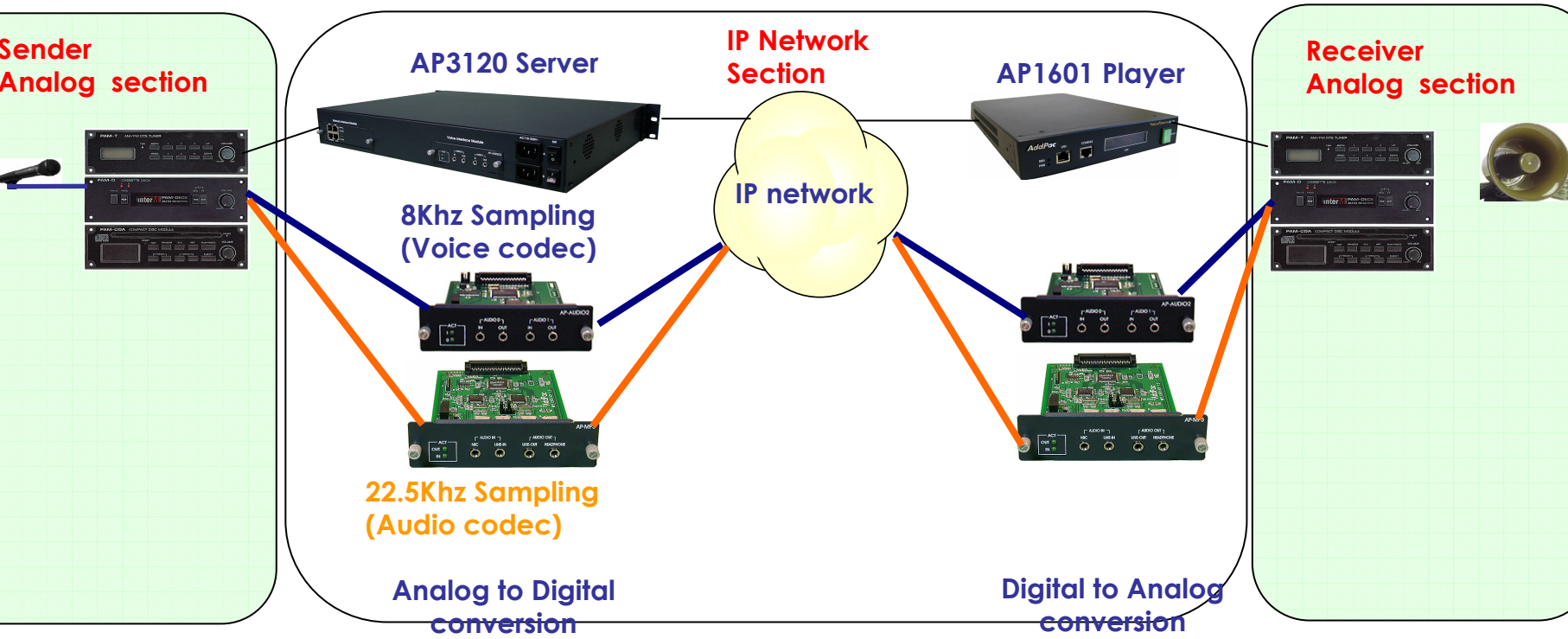


Various Applications of IP broadcasting



NG-IBS Design Feature

IP Broadcasting Design Feature



Merits of AddPac's Broadcasting system

- All embedded system
  - Based on Real Time Operation System (RTOS)
  - Powerful solution for Viruses and hacking
- High quality audio broadcasting without buffering delay
  - Not like PC based streaming broadcasting asking buffering time
- 8 level bandwidth control
  - 29~130Kbps
  - Able to select perfect bandwidth according to network condition
- 22.5Khz sampling(29Kbps: 16khz sampling)
  - Superior sound quality on the same bandwidth
- Duplex broadcasting
  - Able to broadcast from the end-point terminals
- Various terminal models
  - AP1601•2110 •2520G •2520R•2830 2850
  - Offering Broadcasting, FAX broadcasting and VoIP telephony service at one terminal
  - Supports WAN Router/ATM Router at the same time
- Supports Multicast & unicast simultaneously, relay features
- Supports xDSL/cable network & static/dynamic IP
  - Supports various network service

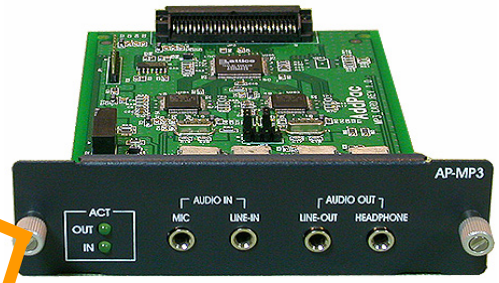
AddPac Technology
NG-IBS Solution

Audio Band(HQ) & Voice Band

High Quality Audio Band Solution & Voice Band Solution



Server



HQ Audio band card

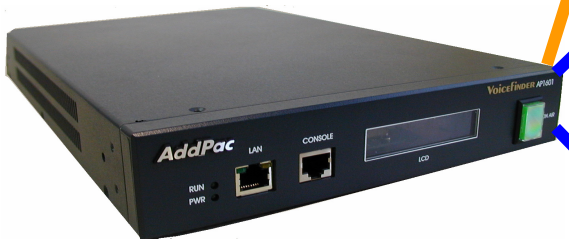


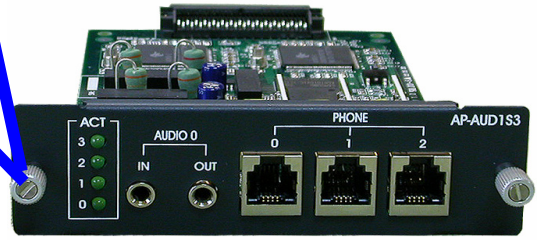
Power Switch



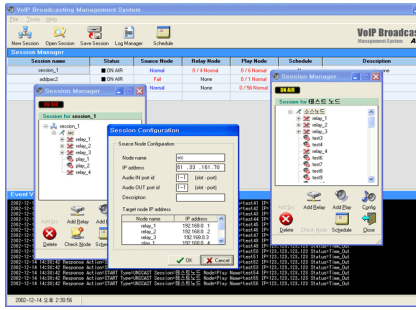
Voice band card

Player





Manager



AddPac IP Broadcasting Solution

❑ Base Components & Option Components

	MODEL	Description
Base Components	AP3120	▪Server ▪Source broadcasting & relay ▪Management 
	AP1601	▪Player ▪Broadcasting receive & play 
	AP-BMS	▪Manager ▪GUI based broadcasting manage. 
Option Components	AP-AUDIO2	▪Voice band audio card ▪2Pair audio in/out interface module 
	AP-AUD1S3	▪Voice band audio card +VoIP card ▪1Pair audio in/out+FXS3 voice ports 
	AP-MP3	▪High quality audio band audio card ▪Direct line out/headphone + direct Mic/line in 
	AP-PSB	▪Power switching box ▪Remote side AMP power manage. 

AP3120 IP Broadcasting Server



HW Feature>

CPU	64bit RISC
Memory	Flash 4MB
	SDRAM 128MB
	Boot ROM 512KB
Network Interface Slot	2x10/100Mbps
	2xAsync. Serial
Analog Interface Slot	2xDirect Audio In/Out
	4xFXS(RJ11)
	4xFXO(RJ11)
	4xE&M (RJ11)
Dimension	65x441x323mm(HWD)

<SW Feature>

Routing protocol	Static / RIP v1, v2 / OSPF v2 / IEEE 802.1Q VLAN Routing / IGMP / Multicasting Packet Generation
VoIP services	VoIP based voice multicasting / Multiple PTP VoIP based voice broadcasting / H.323 and SIP dual stack / H.323 gatewa & gatekeeper support
Security	Standard & extended IP access List /Enable-disable for specific protocols/ Multi-level user account management / Auto-disconnect for Telnet/Console Sessions
Network manage.	SNMP agent(MIB v2) / remote management using console, rlogin, teln / web based management / traffic queuing

IP Broadcasting Terminal

AP2110 VoIP Gateway

- Fixed 4 Ports FXS Voice
- One Interface Slot
- 4 Ports FXS/FXO/E&M, 1 Port E1/T1, 2 Ports Audio
- Suitable for introducing VoIP telephony service, FAX, broadcasting service at one time







AP2520 VoIP Gateway

- Two Interface Slots
- 4 Ports FXS/FXO/E&M, 1 Port E1/T1, 2 Ports Audio
- Suitable for step-by-step function expansion



AP1601

- One Interface Slot
- ON-AIR Indication Lamp
- 2×20 LCD
- Broadcasting- specialized





IP Broadcasting Power Switching

❑ AP-PSB : Amplifier power control for IP broadcasting service





- Operating with AddPac's IP broadcasting system
- Terminate power supply during no service offered, Back-ground noise deletion function
- Master- Slave type power control : receives power on-off command from AP2520, AP1601 via RS-232C, LAN

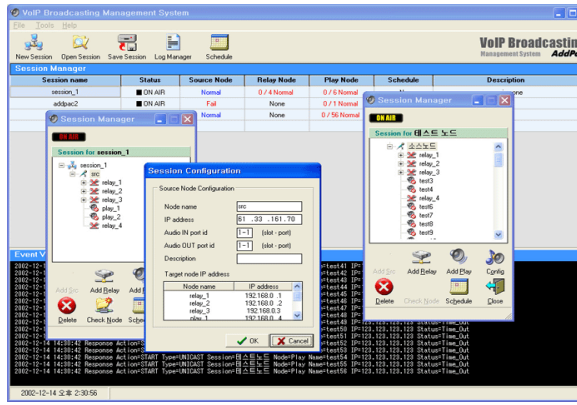
❑ Feature

- RISC CPU, Flash Memory 512K, SDRAM 1MB
- 1-Port 10Mbps Ethernet Interface(1xRJ45)
- 1-Port Asynchronous Serial Interface (1xRJ45)
- Power : 110~220VAC, 50/60Hz, 5Watt

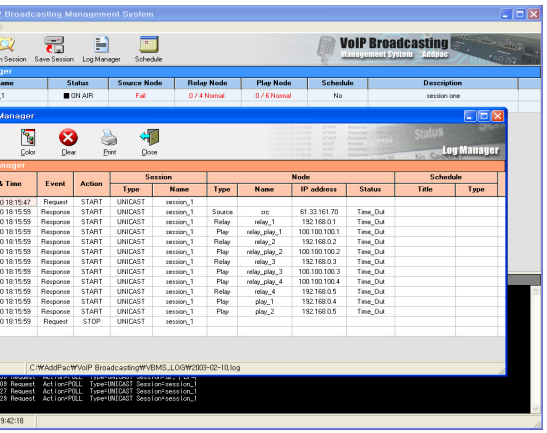
IP Broadcasting Manager

❑ GUI type management S/W

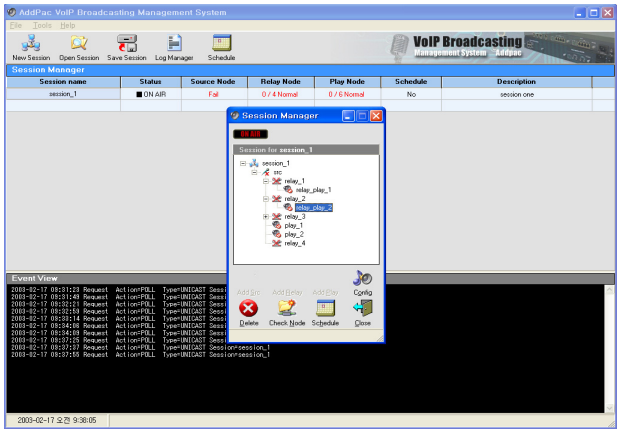
- Broadcasting group setting & saving
- Real-time & scheduled broadcasting
- Real-time monitoring of broadcasting condition
- Event Log Manager
- Report Manager
- Window GUI Mode
- Web-based management



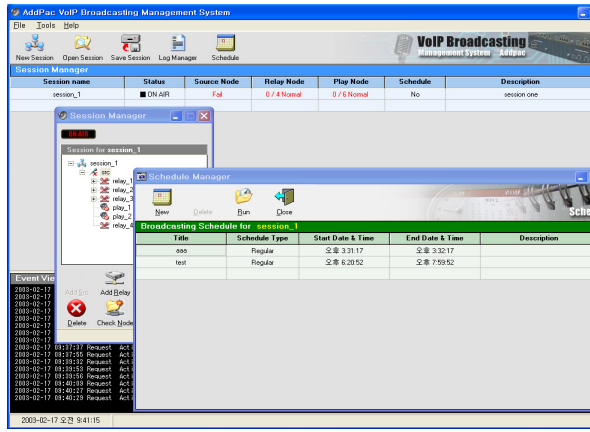
Broadcasting manager



g Manager



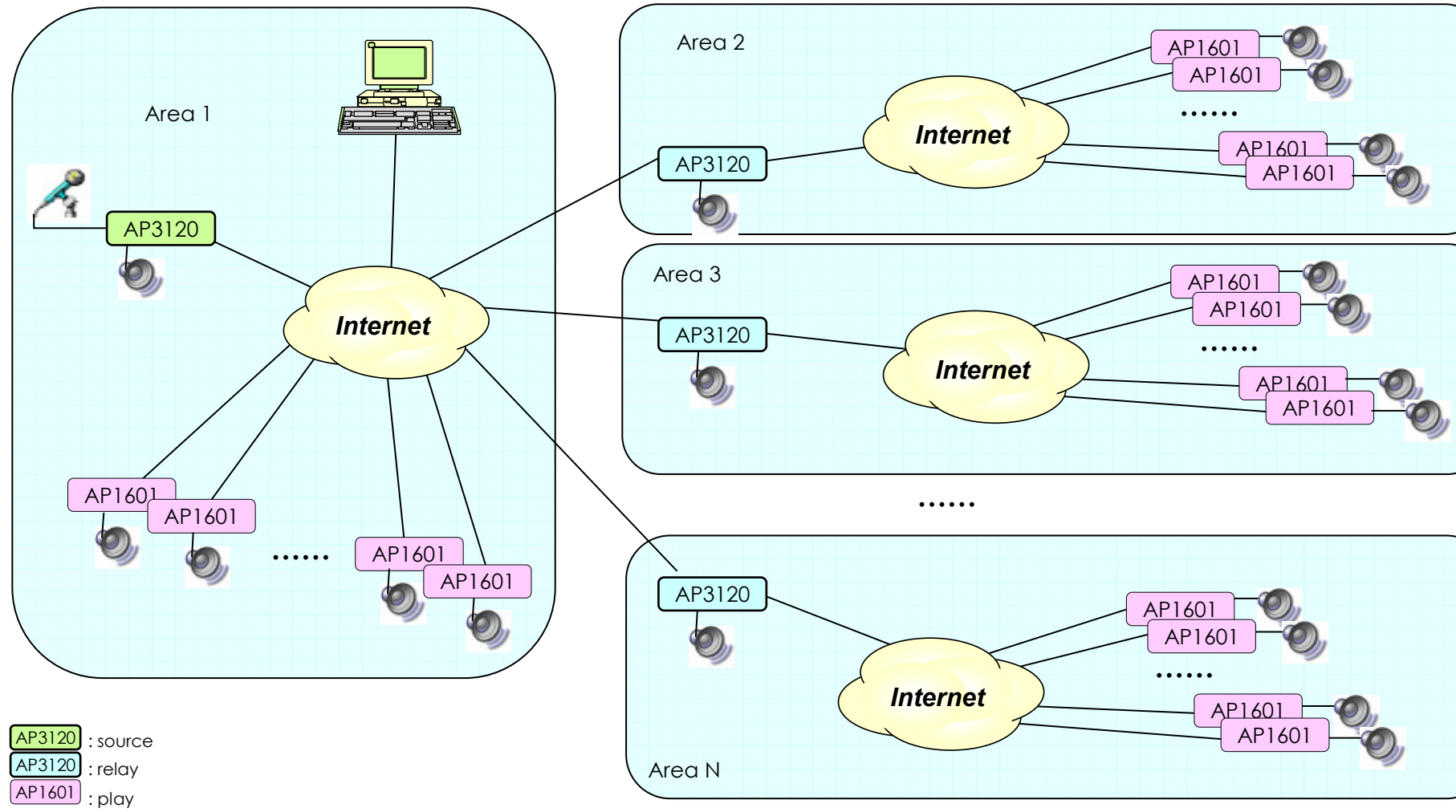
Broadcasting Group Setting



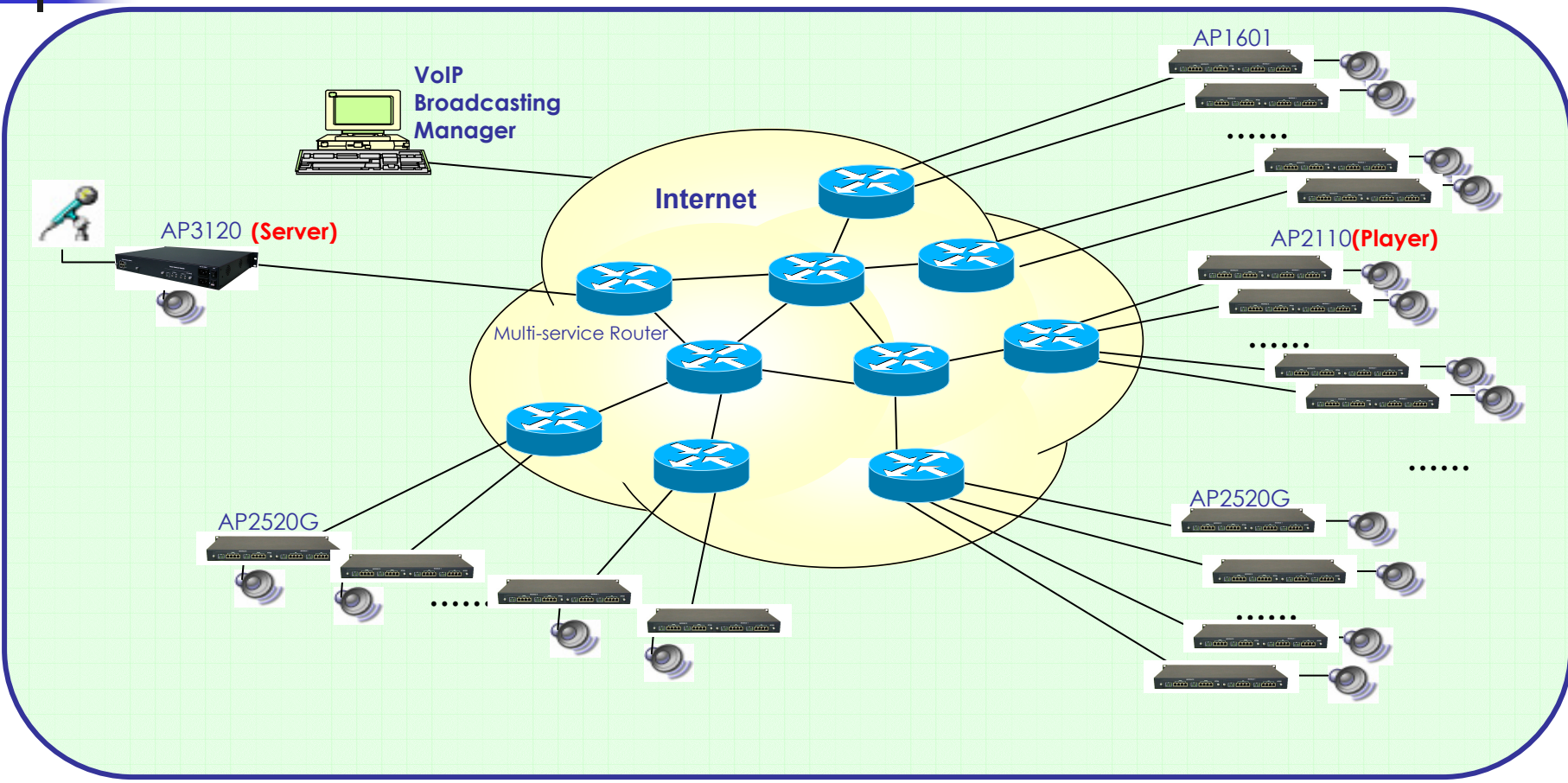
Broadcasting schedule setting

NG-IBS Network Diagram

Unicast relay broadcasting network

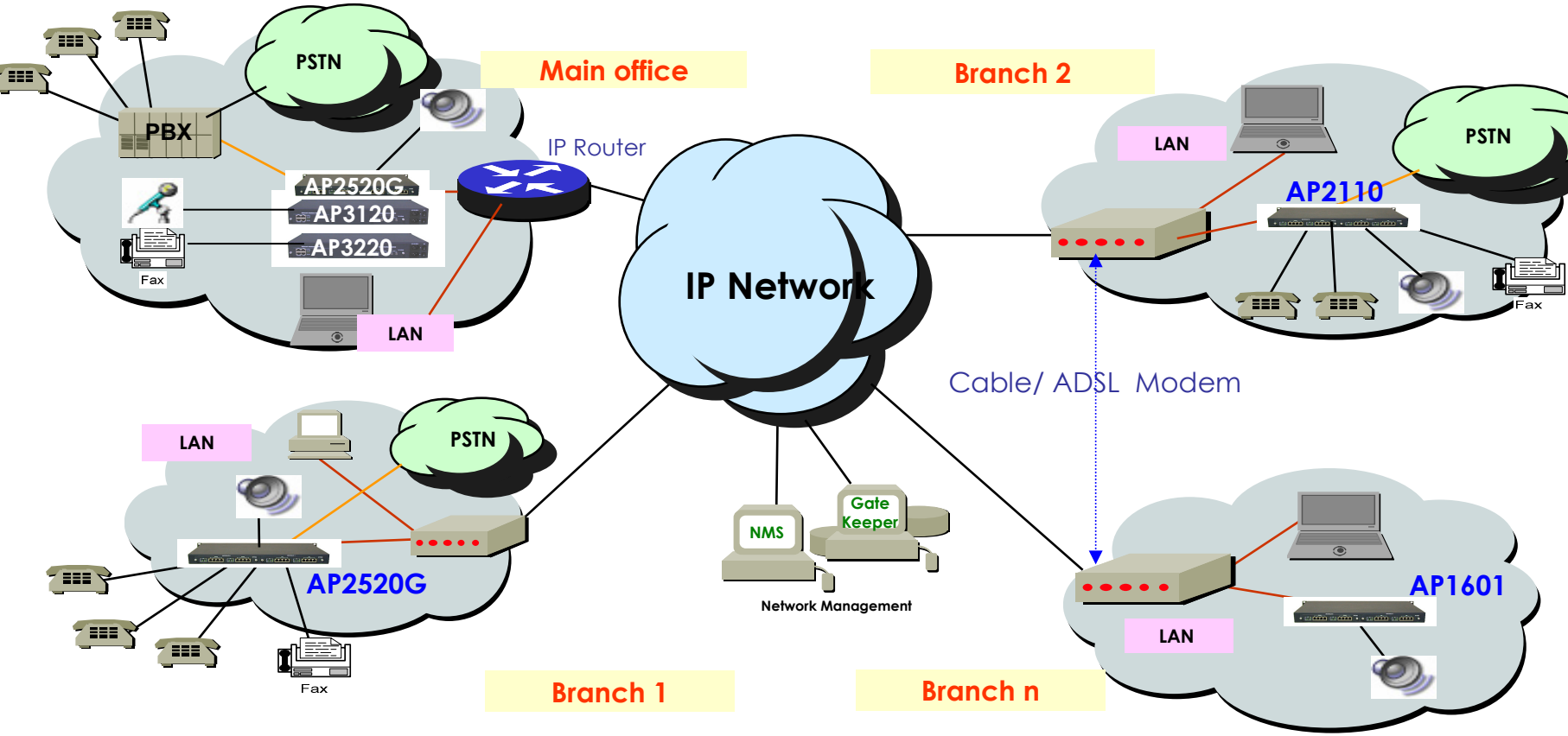


Multicast broadcasting network



- Multicast Protocol
- Broadcasting to multi-locations with a single channel bandwidth
- Adoptable when the network router supports IGMP

Broadcasting•Fax•Telephone Integrated model



- On terminal side, Integrated broadcasting, Fax, Telephone service can be supported
- Possible to add functions step-by-step (Broadcasting→ Telephone→ Fax)
- Reduce Installation and management cost