

1xEV Opportunities in Broadband Workshop

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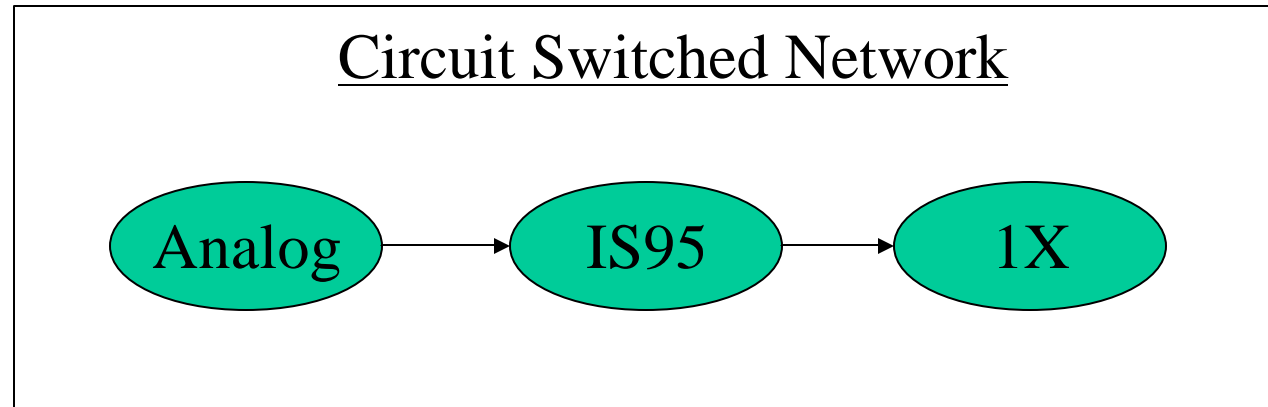
Future Network Vision



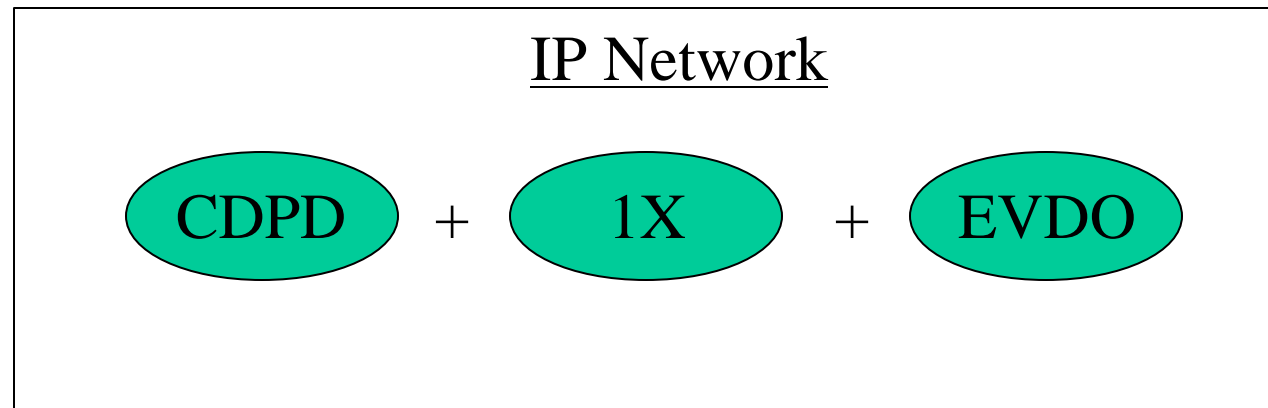
- **Spectrally efficient air interface**
- **Smart antennas**
- **Interference cancellation**
- **Wireless backhaul**
- **All IP converged network**
- **More efficient vocoders**
- **New services (SIP based)**
- **Reduced capex per unit capacity**
- **Reduced expense per customer**

Network Evolution History

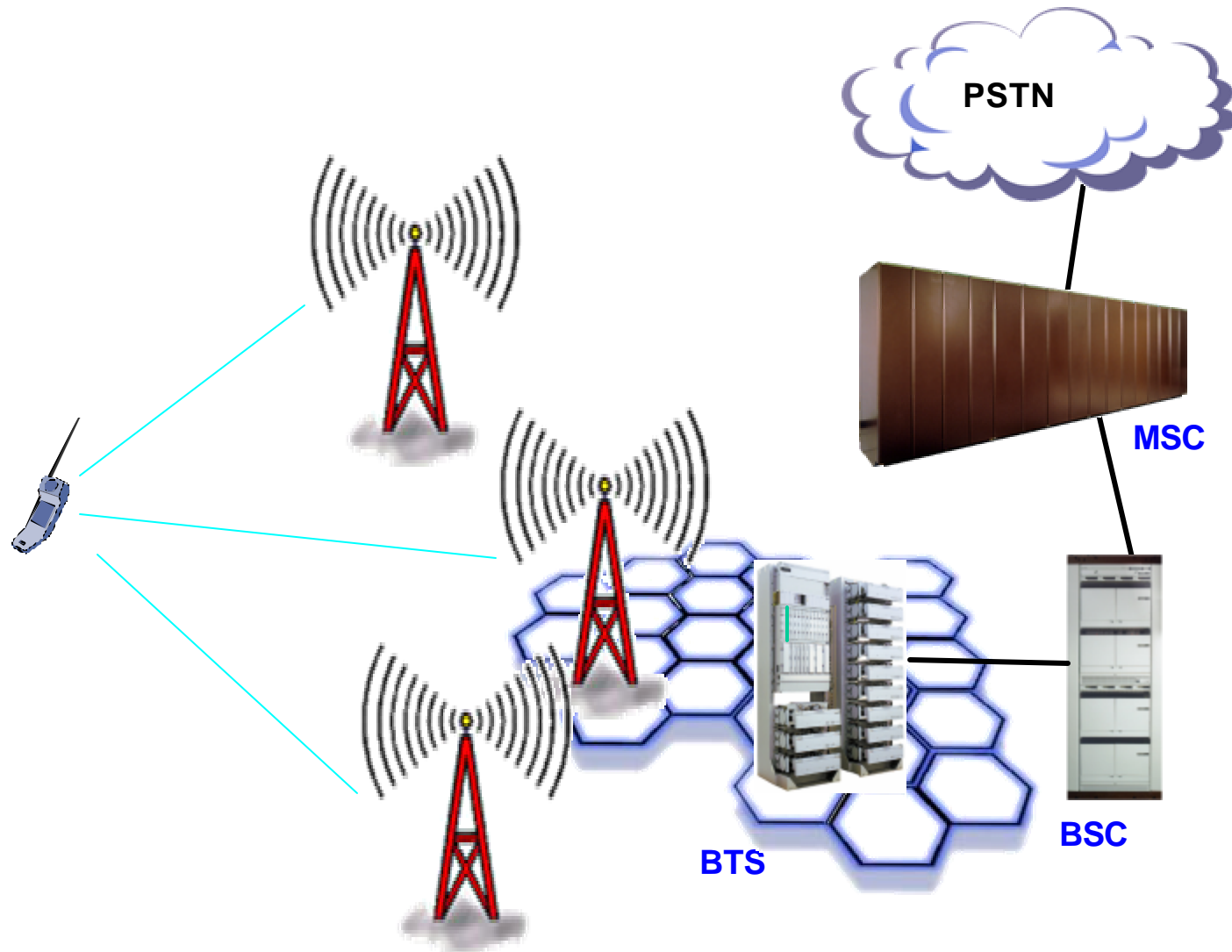
Voice
Centric



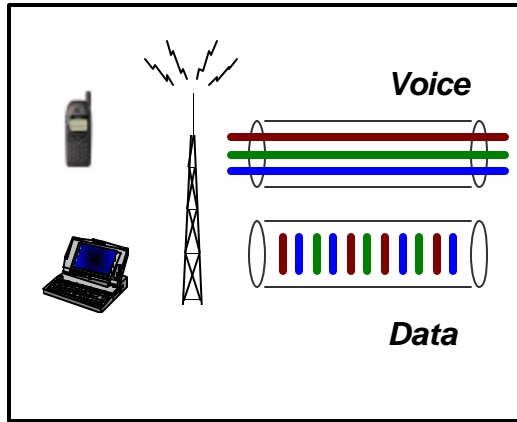
Data
Centric



Analog Cellular Networks

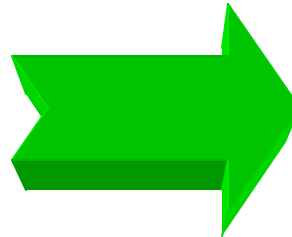


Network Direction



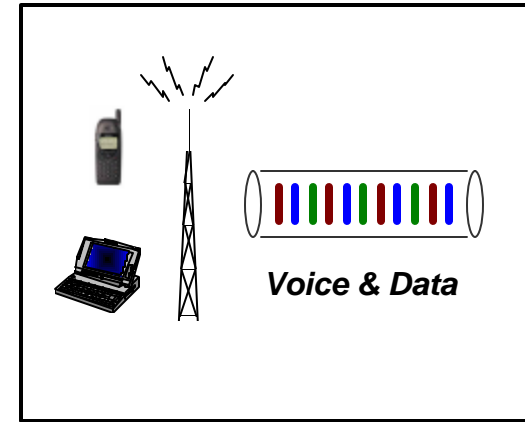
Today

- Separate networks
- CS optimum for:
 - Voice
 - SMS
 - MSC



Transition

- Improve VoIP
- Deploy IPv6
- Deploy IMS + SIP
- Feature transparency
- Architecture evolution



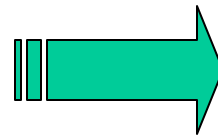
Future

- Converged network
- Multimedia services
- Best cost structure
- Radio/access technology agnostic
- IP Core

Air Interface Evolution

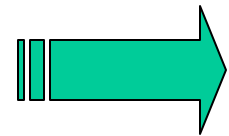
2002-2003

**IS 2000 Rev 0
(1XRTT)**



2006-2007

**IS 2000 Rev D
(?EV-DV?)**

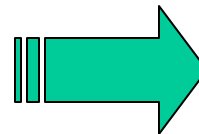
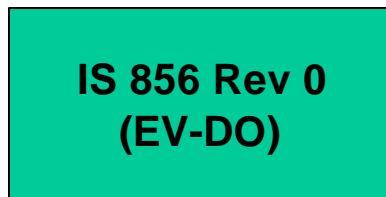


- 2X voice capacity
- 144 kbps peak
- 100% coverage

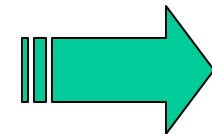
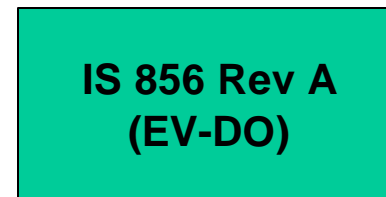
- 3.1 Mbps peak
- Supports CS voice

Air Interface Evolution

2003-2004



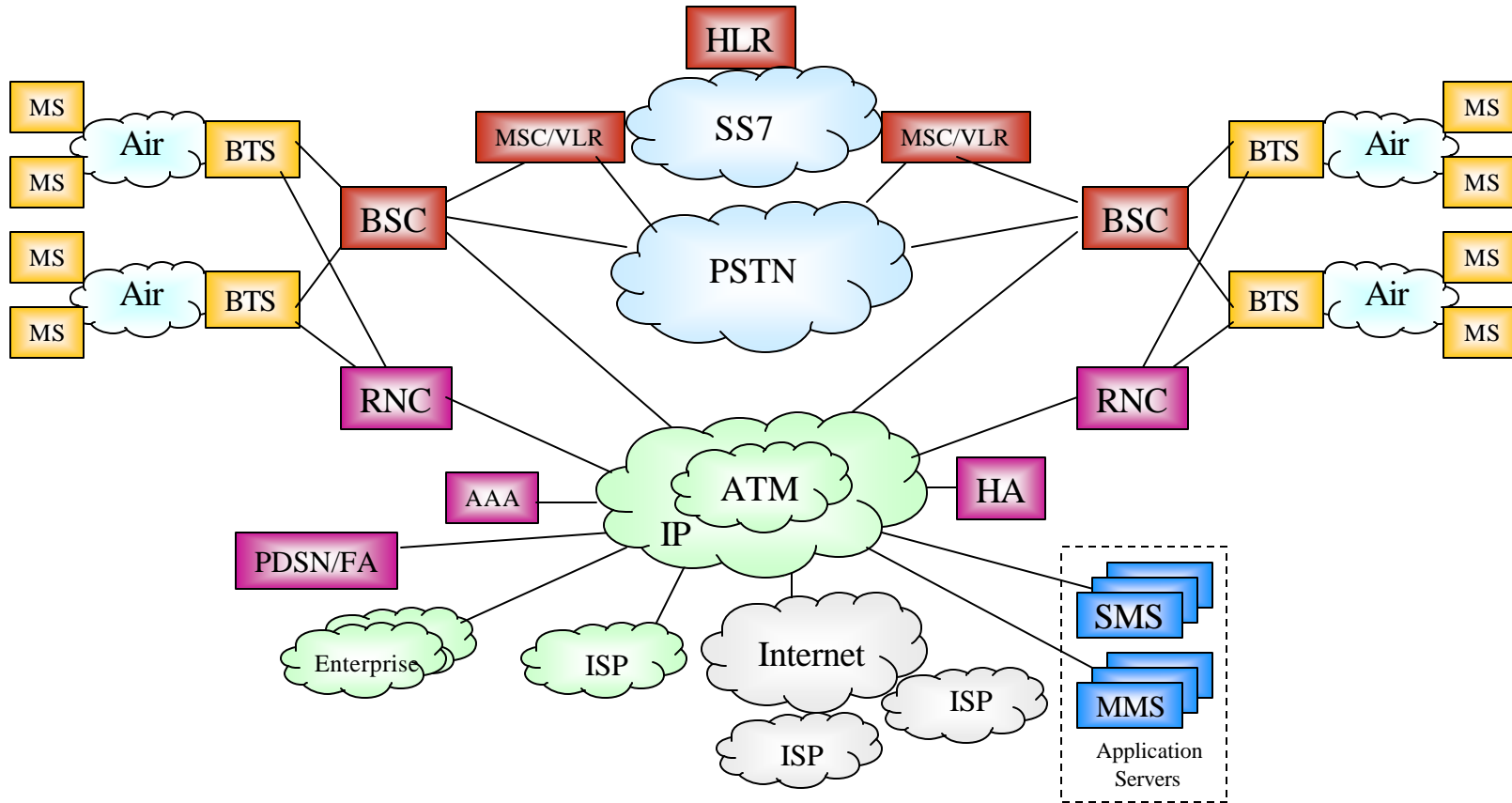
2006-2007



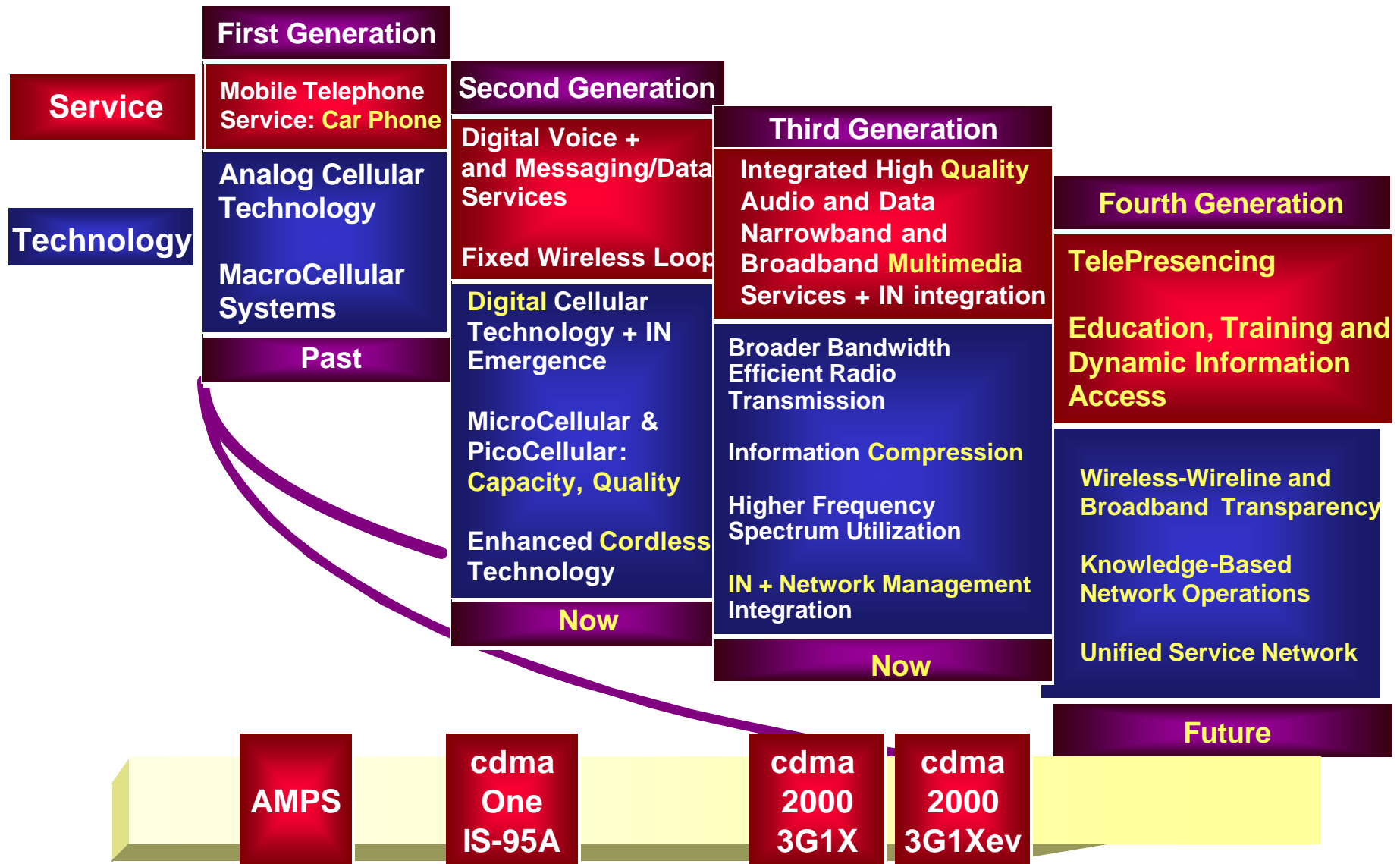
- 2.4 Mbps downlink
- 144 Kbs uplink
- All IP
- Multi-mode devices
- Handoff to 1X
- 2 markets 4Q03

- 3.1 Mbps downlink
- 1.8 Mbps uplink
- Broadcast
- Reduced latency
- QOS
- Potential for VoIP
- Converged network opportunity

1x RTT/EVDO Network Architecture



Wireless Network and Service Evolution



Present to the Future

■ Fundamentals

- Network Reliability
- Interoperability of Network Elements
- Scalable
- Standard Operating Environment

■ Evolution Of Network Architecture

- Market Driven Applications and Content
- Move from Centralized to Distributed Processors
- Mobility Management
- Reduce Packet overhead (Compression)
- Quality of Service

■ Key Attribute is Network Quality

- Measurable Success
 - Customer Satisfaction
 - Exceeding Customer Expectations