3G CDMA
Enabling Wireless Broadband

Demonstration for the Subcommittee on Telecommunications and the Internet

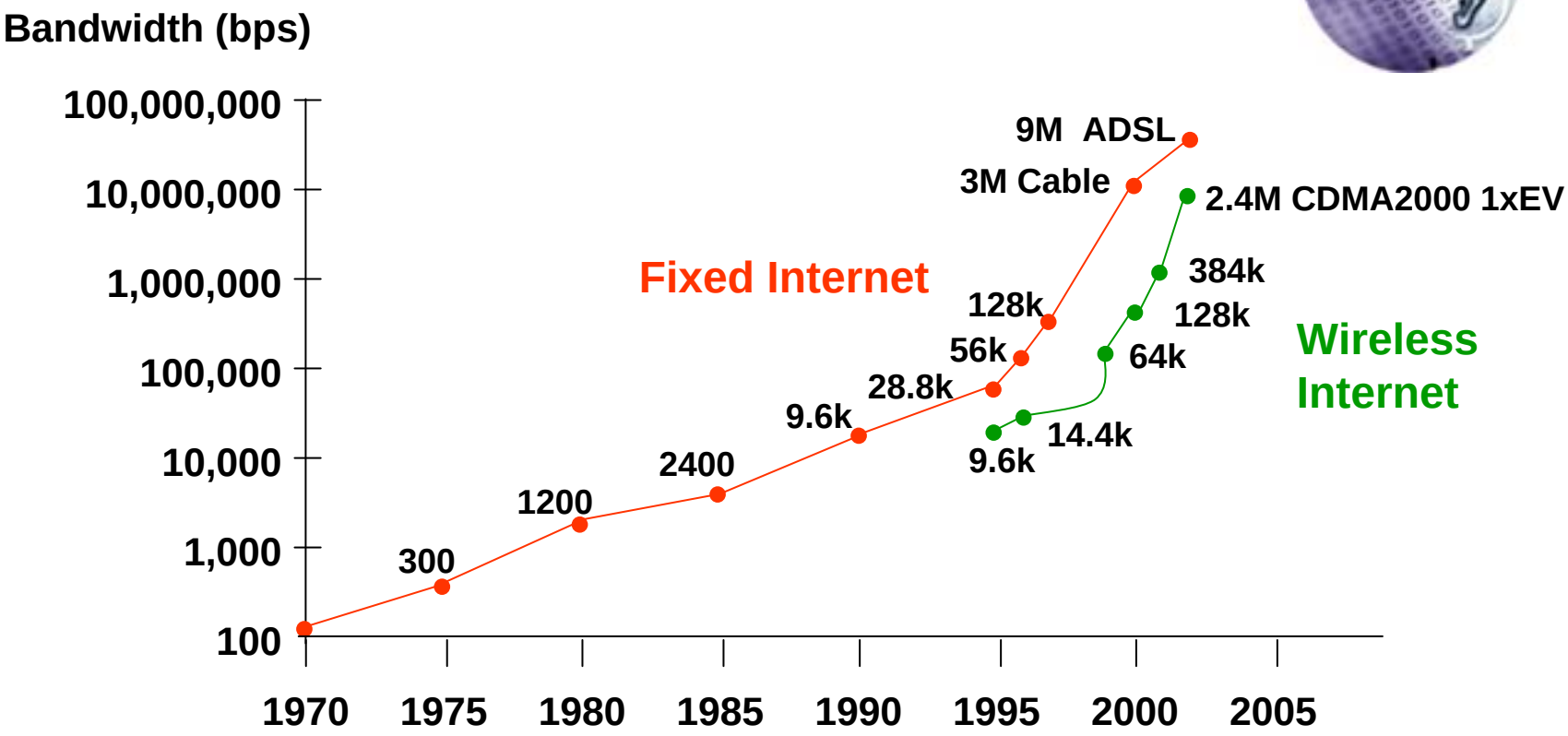
May 19, 2004

Launchpad Applications
BREWapi
BREW Distribution System
gpsOne
CDMA Chipsets
Homeland Security Initiatives
Fleet Management Solutions
CDMA2000 1X
CDMA2000 1xEV-DO
CDMA2000 1xEV-DV
WCDMA/UMTS
Application Solutions
Mobile Processors
Base Station Processors
Radio Processors
CDMA University
Network Optimization
Software Tools
Development Tools
QCTest Tools
Client Software
Digital Cinema
Advanced Security Solutions

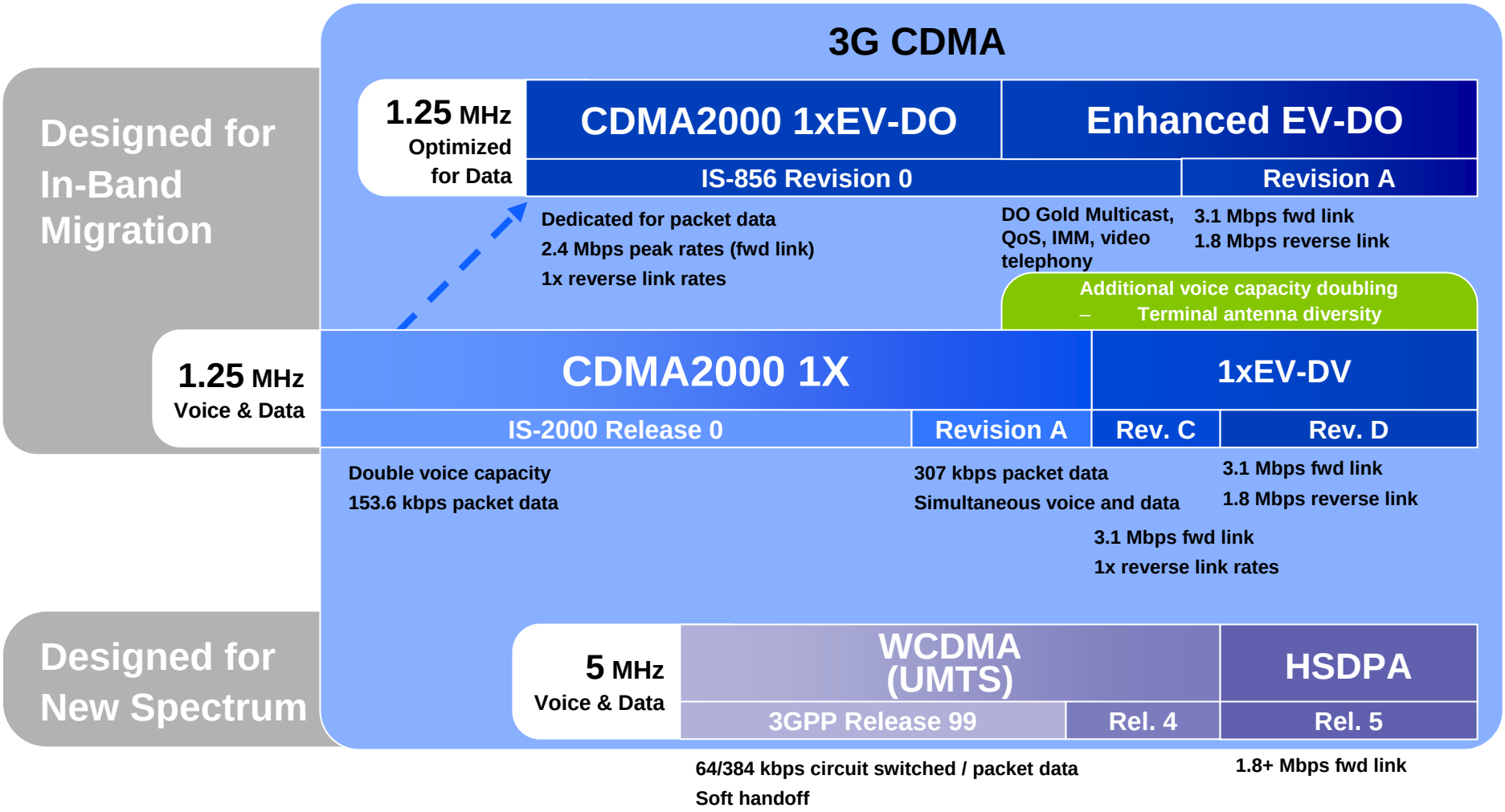
Australia • Austria • Belarus • Brazil • Canada • Chile • China • Colombia • Denmark • Dominican Republic • Ecuador • Guatemala • India • Indonesia • Israel • Italy • Japan • Mexico • Moldova • New Zealand • Nicaragua • Panama • Romania • Russia • South Korea • Sweden • Taiwan • Thailand • United Kingdom • United States • Venezuela • Vietnam

QUALCOMM CDMA Technologies
QUALCOMM Technology Licensing
QUALCOMM Wireless and Internet Group
QUALCOMM Strategic Initiatives

Internet Evolution: Bandwidth



3G CDMA Evolution – Today and Tomorrow



What is CDMA2000 1xEV-DO

- 1xEV-DO – EVolution, Data Optimized
  - Full name is CDMA2000 1xEV-DO - part of the 3G CDMA family
- Delivers data at rates up to 2.4 Mbps
  - Average data rates in the hundreds of kbps
  - Typically 300 kbps – 600 kbps
- Fixed, portable or fully mobile use
  - "Always-on" experience
- Cost-effective for operators, requires little spectrum

- 1xEV-DO is a 3G data evolution for CDMA operators
- Data and voice handoffs with CDMA
- Devices are backward/forward compatible
- Incremental upgrade over current CDMA2000 1X network
- 1xEV-DO works seamlessly with existing, IP-based network infrastructure

CDMA2000 1xEV-DO

Over 6 Million Subscribers and Growing

Coming Soon

biquiTel

ACS Alaska Communications Systems

Alegro PCS

(Telecsa Ecuador)

vivo

APBW 亞太行動寬頻電信

TELKOM INDONESIA

Pelephone

EV-DO Rel 0	QUALCOMM 5500 San Diego, CA USA
EV-DO Rel 0, GSM/GPRS	QUALCOMM 6500 San Diego, CA USA
EV-DO Rel 0, GSM/GPRS	QUALCOMM 6550 San Diego, CA USA
EV-DO Rel 0, EV-DV, GSM/GPRS	QUALCOMM 6700 San Diego, CA USA
EV-DO Rev A, GSM/GPRS	QUALCOMM 6800 San Diego, CA USA
EV-DO Rev A, GSM/GPRS	QUALCOMM 7500 San Diego, CA USA
EV-DO Rev A, GSM/GPRS, WCDMA	QUALCOMM 7600 San Diego, CA USA

Over 60 1xEV-DO Devices…*commercially introduced*

$600+ range:

$501 - $600:

$401 - $500:

PC Cards from $150:

$301 - $400:

$201 - $300:

$101 - $200:

Source: Retail pricing from South Korea, except when marked (*) which denotes Japanese retail price; PC cards from Korea, Japan, and the United States

What's Next for CDMA2000 1xEV-DO?

Multimedia Services, Increase Data Rates and System Capacity, and Lower Costs

Quality of Service (QOS)
Different levels of priority

Instant Multi-media
Audio and video together

Personal Media
Multiple channels of video/audio

Equalizer
Increase sector capacity 20-60%

Receive Diversity
4X capacity in 1.25 MHz

2x Multicarrier
Two 1xEV-DO carriers simultaneously, doubling data rates

Location-based services (LBS)
High resolution locations