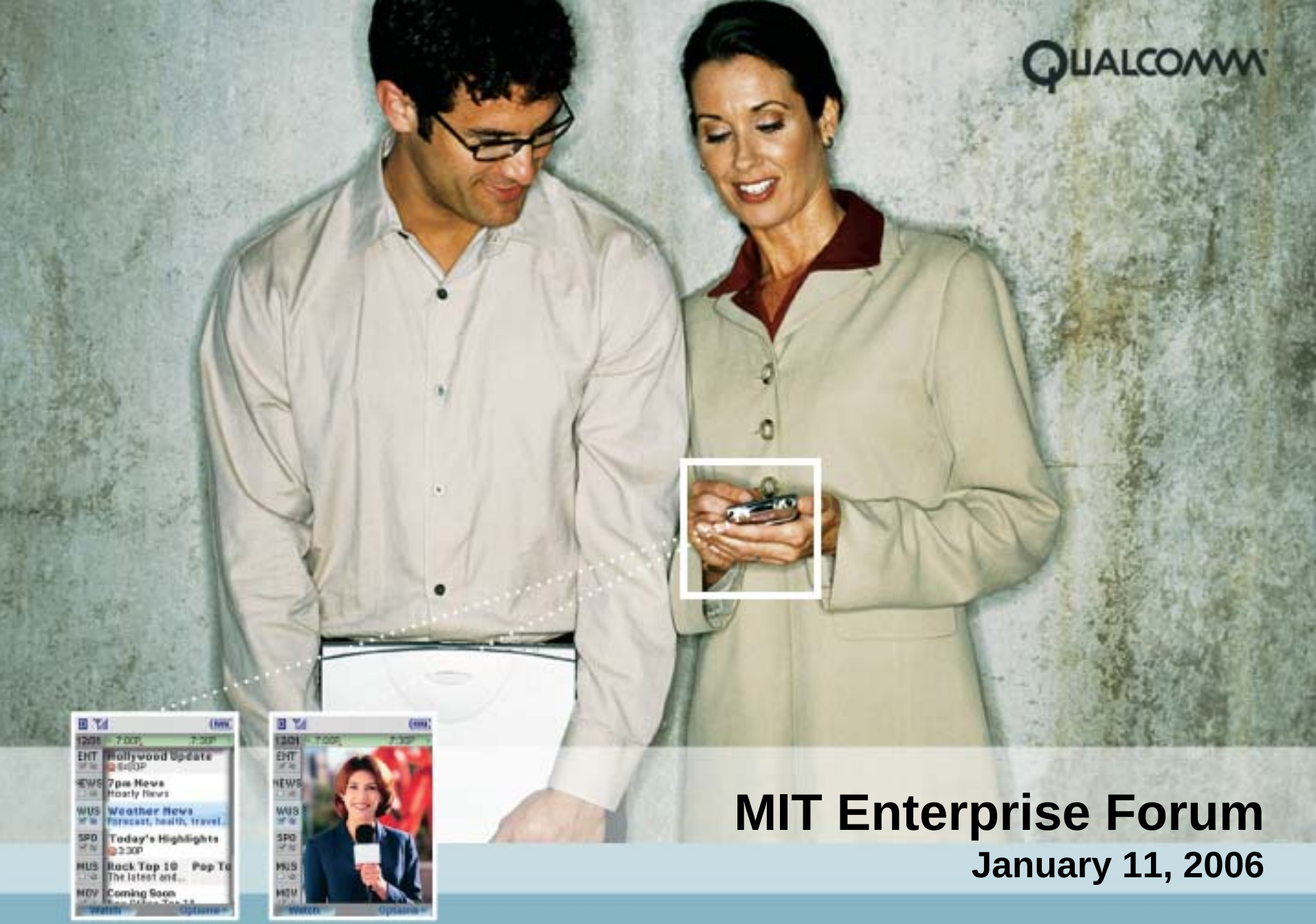


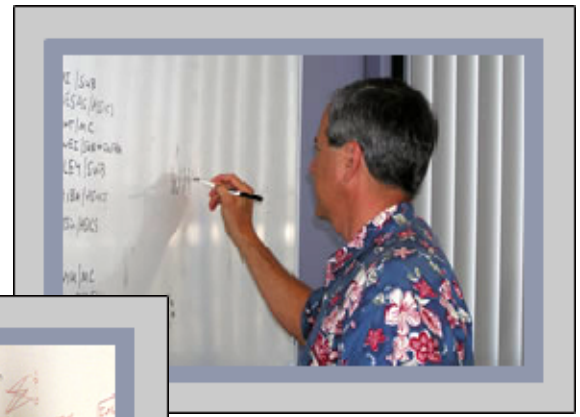
MIT Enterprise Forum

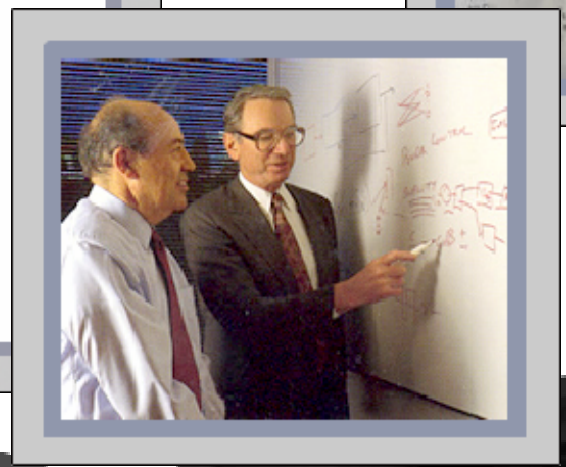
January 11, 2006

Dr. Irwin Mark Jacobs

Founded July 1, 1985

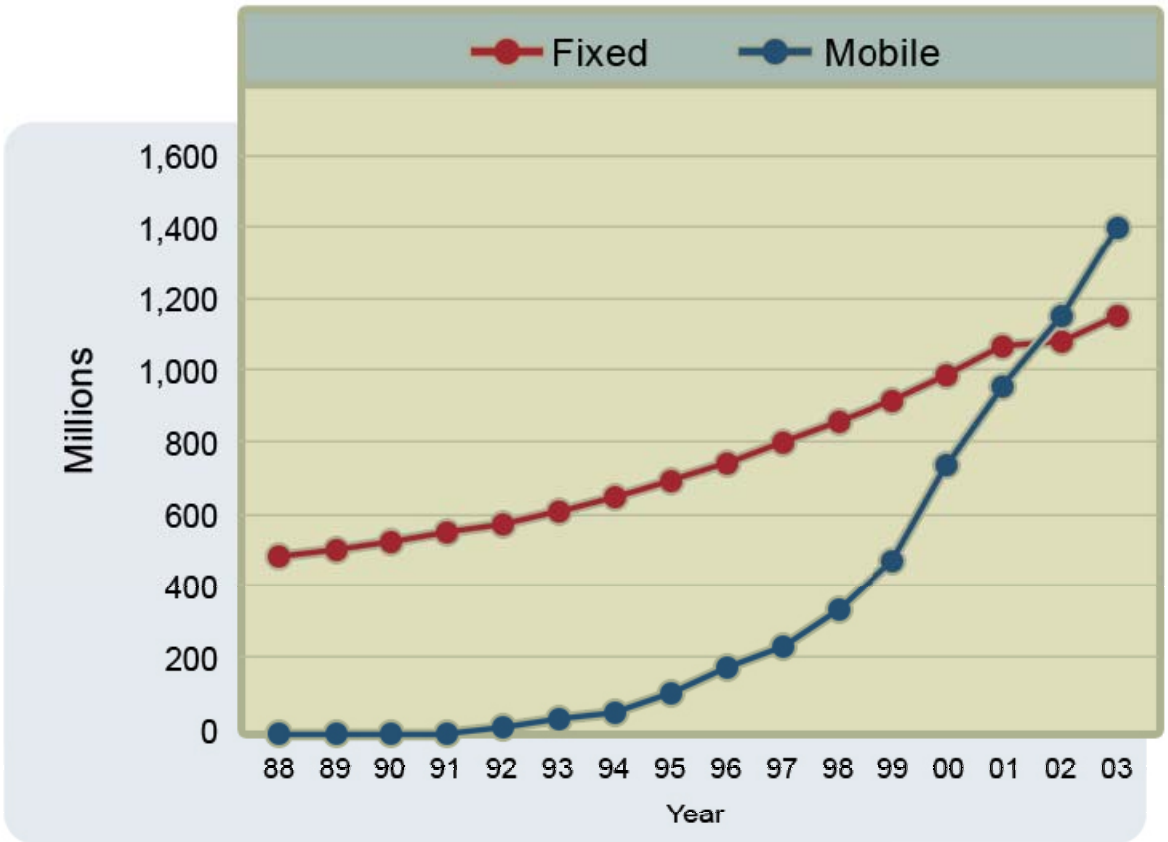
No Products at Start
Strategy – Innovation: Digital & Wireless Communications & Applications





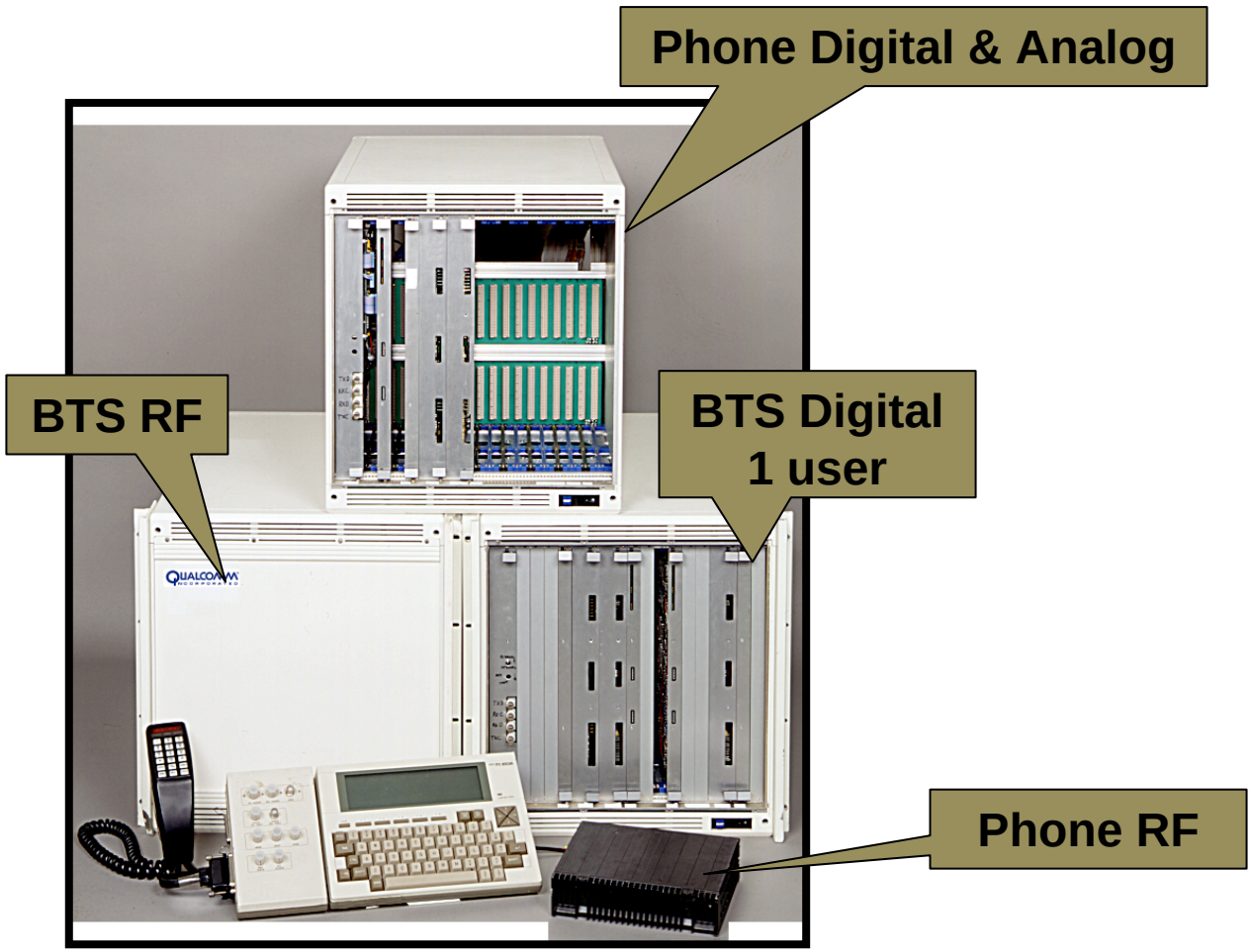
Rapid Mobile Growth from 1988

Telephone Main Lines and Mobile Subscribers World Market 1988-2003



Source: ITU World Telecommunication Indicators, 2004

November 1989 – Demonstration BTS & “Mobile Phone”



2005 Cellphone Compares Favorably to 2000 Desktop

Intel Pentium based desktop computer

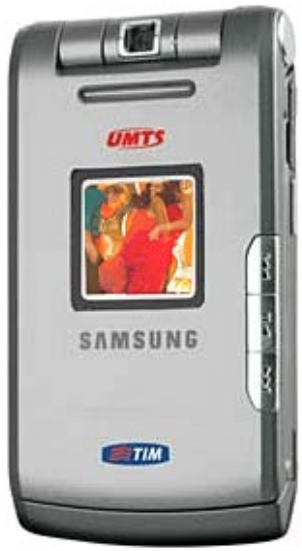
- Date: February 2000
- Processor: Pentium III
- Speed: 550 MHz
- RAM/Flash: 128 MB
- Drive/Storage: 20 GB
- Network Connection: 56kbps peak (dialup)
- Price: $2,111 with monitor

Samsung SCH-i730 (1xEV-DO)

- Date: June 2005
- Comm's Processor: QCT MSM6500
- PDA Processor: Intel Bulverde
- Speed: 520 MHz
- RAM/Flash: 128 MB
- Drive/Storage: 64 MB + SD Card – up to 2 GB
- Network Connection: 2.4Mbps peak (mobile)
- Price: $600

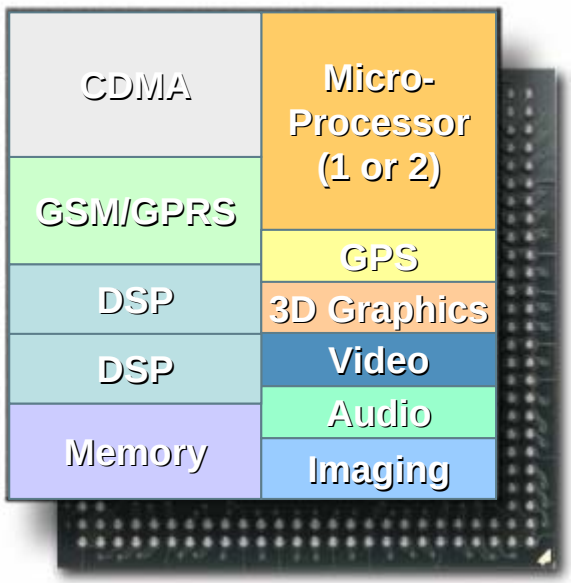
WCDMA (UMTS) LGE U880 and Samsung Z510

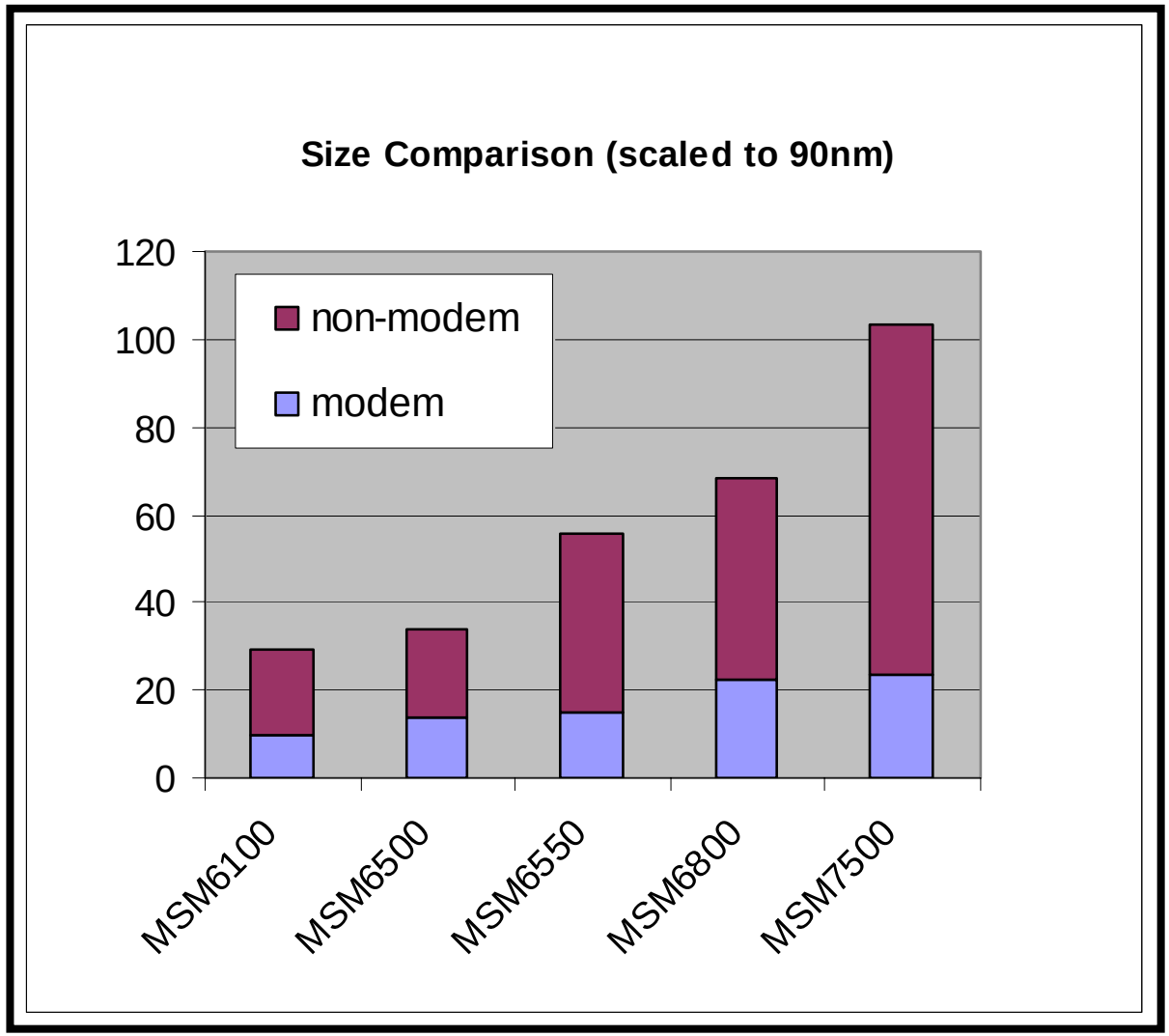
Newly launched thin phones



	LGE U880 MSM6250	SAMSUNG SGH-Z510 MSM6250A
Size	98.8 x 49 x 18.2	97 x 52 x 14.9
Weight	99 g (with 840mA Battery)	97 g (with 800mA Battery)
Camera	1.3Mpixel	1.3Mpixel
LCD	Main 2.0 inch / 176 x 220 (262K) Sub 1.2 inch / 96 x 96 (65K)	Main 2.2 inch / 176 x 220 (262K) Sub 1.2 inch / 80 X 64 (65K)
Others	BT / External T-Flash / MP3	BT / External T-Flash / MP3

Enabled by Moore's Law: From Just a Modem Supporting Phone Calls to Much More





QCT Platforms Enabling Mobile Wireless Solutions

	Value Platform	Multimedia Platform	Enhanced Platform	Convergence Platform
MUSIC	MP3	MP3/ WMA/REAL/E-AAC+ Surround Sound	MP3/WMA/REAL/E-AAC+ Surround & Positional Sound	MP3/ WMA/REAL/E-AAC+ Surround & Positional Sound
3D Graphics		50k poly/sec, 400 pix/sec	100k tri/sec, 7M pix/sec	4M Tri/sec, 133M 3D pix/sec
CAMERA	1.3Mpixel	3Mpixel	5MPixel[1]	8 MPixel
VIDEO		15 fps QCIF	Rec: 15 fps QVGA Play: 30 fps QVGA	30 fps VGA
LOCATION (LBS)	A-GPS	A-GPS Mode Standalone Mode Car Navigation	A-GPS Mode Standalone Mode Car Navigation	A-GPS Mode Standalone Mode Car Navigation
MEDIACAST & comp wireless		Bluetooth	Bluetooth, WLAN Mediacast	Bluetooth, WLAN Mediacast
DISPLAY	**sQCIF** [128 x 96]	**QCIF** [176 x 144]	**QVGA** [320 x 240]	**VGA** [640 x 480]
uPROCESSOR	up to 100MHz	up to 180MHz	270 MHz	Dual CPUs 400MHz - 1GHz *

*** Scorpion – 2100 DMIPS, 240 mWatts superscalar ARM v7 compliant CPU**

Footnote 1: Depends on MSM

New “Scorpion” Mobile Microprocessor Core

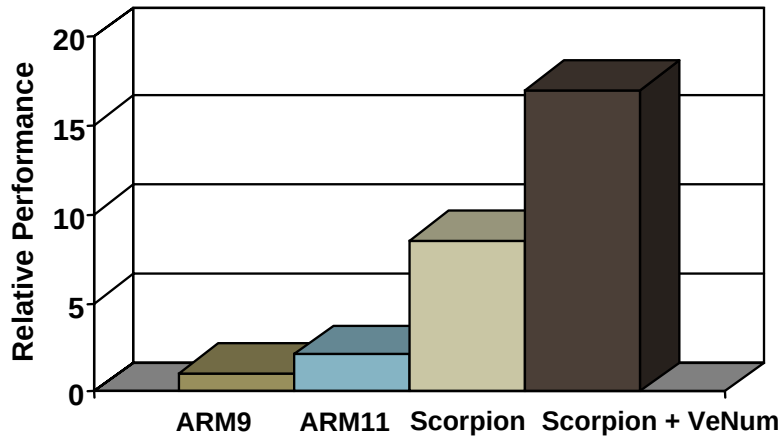
- Scorpion – low power, high performance superscalar CPU developed by QCT
  - 1GHz CPU for battery powered wireless applications
  - Low power, low leakage, 65-nm process
  - Specifically designed and optimized for MSM solutions
  - ARM v7 compliant, dynamic voltage & clock scaling
- VeNum – low power, high performance multimedia coprocessor
  - Up to 2X performance boost for multimedia applications
  - ARM NEON™ technology - 8 billion operations per second

How Scorpion stacks up

Feature	Cortex-A8	Scorpion
Frequency	>600MHz	1GHz
Performance	1200 DMIPS	2100 DMIPS
Power @ 1200 DMIPS	300 mWatts	240 mWatts

NOTE: in low-power 65nm technologies. Uses Dhrystone 2.1 (DMIPS)

CPU Delivers Up To 16x Performance Over Previous QCT Generations



Collaboration Between QCT and ARM on v7 Architecture

Wireless Roadmap - *Applications Drive Technology Choice*

Wide Area Multiple Access Technologies

for cdmaOne/CDMA2000 operators

CDMA2000 1X → CDMA2000 1xEV-DO → EV-DO Rev A → EV-DO Rev B*

for WCDMA/GSM/GPRS operators

Rel-99 WCDMA → Rel-5 HSDPA → Rel-6 HSUPA*

Wide Area Multicast Technologies

In-band 3G multicast for CDMA2000 operators

EV-DO Gold → EV-DO Platinum Multicast*

In-band 3G multicast for WCDMA operators

WCDMA MBMS*

Dedicated multicast network for 3G operators

FLO (Forward Link Only)

Local Area Technologies

for home, enterprise, campus and hotspot access

802.11b → 802.11a/g → 802.11n*

*These technologies are in process of standardization

Wireless Roadmap - *Applications Drive Technology Choice*

Wide Area Multiple Access Technologies

CDMA | CDMA/TDM | OFDM

for cdmaOne/CDMA2000 operators

CDMA2000 1X → CDMA2000 1xEV-DO → EV-DO Rev A → EV-DO Rev B*

for WCDMA/GSM/GPRS operators

Rel-99 WCDMA → Rel-5 HSDPA → Rel-6 HSUPA*

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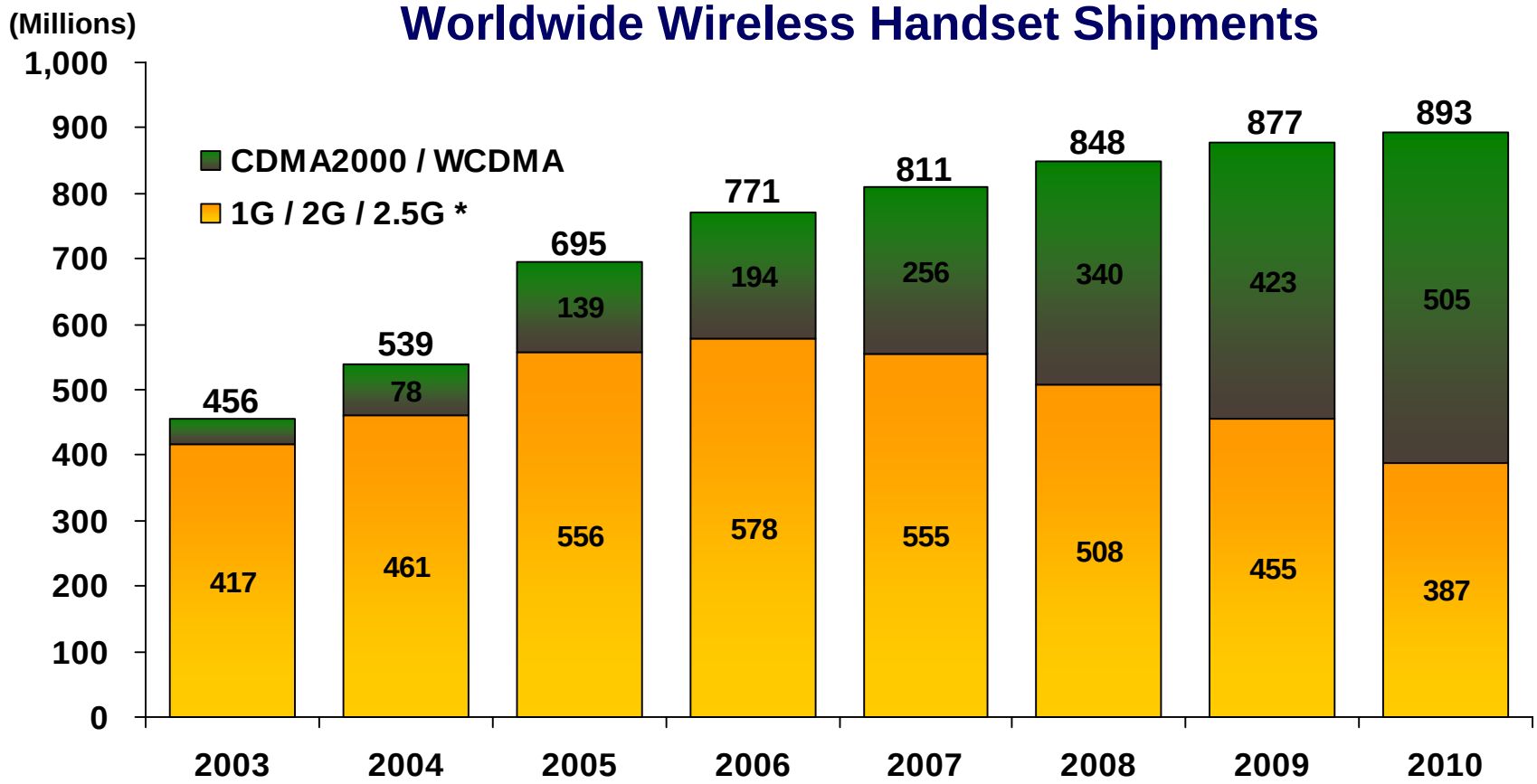
802.11b → 802.11a/g → 802.11n*

*These technologies are in process of standardization

Trend: Global Wireless Handset Shipments

3G (CDMA2000 & WCDMA) will make up 60% of total shipments by 2009

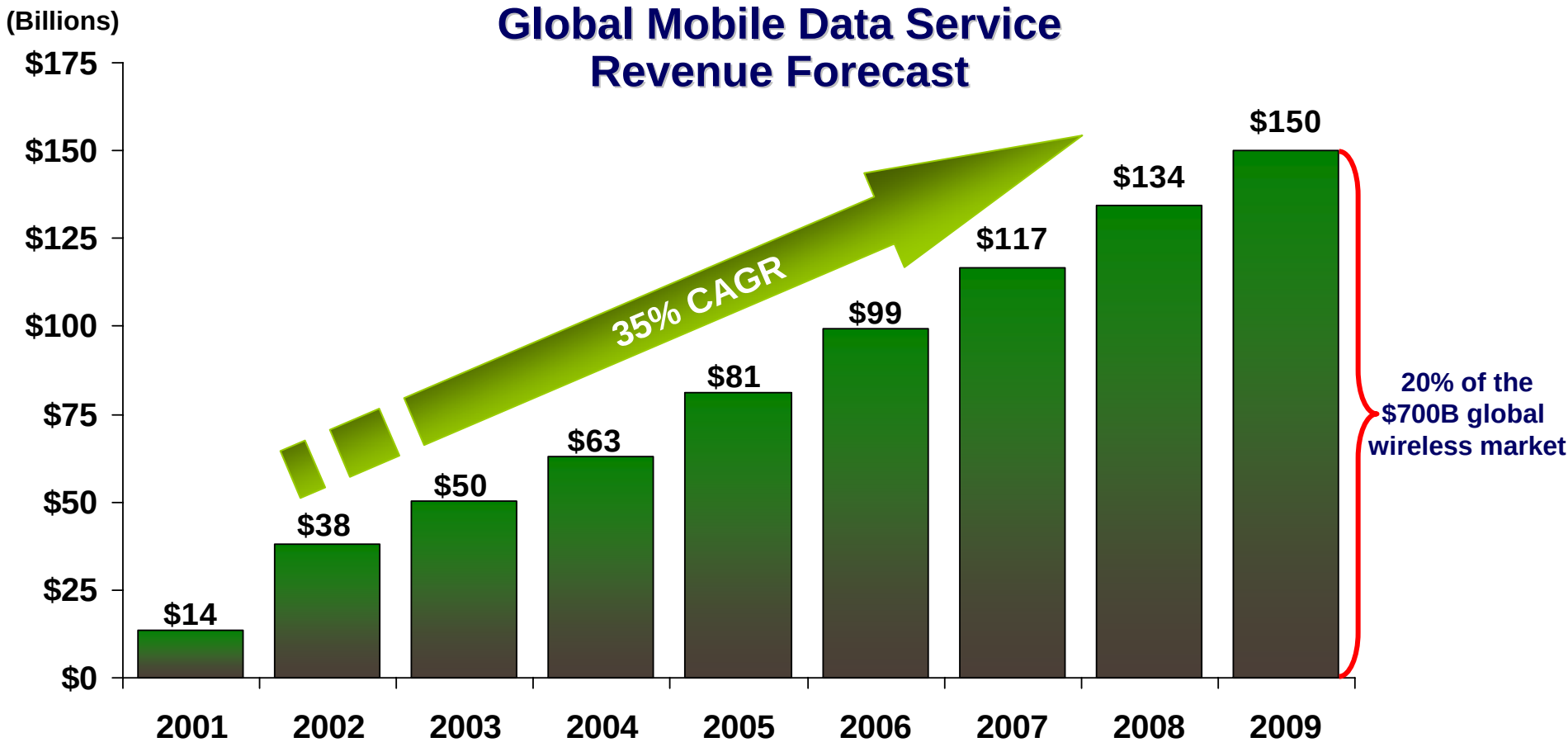


* Includes Analog, cdmaOne, TDMA, PDC, GSM, GPRS and EDGE

Source: Average of Strategy Analytics (August 2005) and Yankee Group (October 2005) handset forecasts

Trend: Demand for Mobile Data Is Rapidly Growing

More and more enterprises and consumers are relying on mobile data services



The demand for additional spectrum, spectral efficiency and network capacity is increasing

Source: Global Mobile Market Forecast, The Yankee Group, October 2005

New – Laptop 3G CDMA Wide Area Mobile Broadband

Embedded EV-DO and HSDPA modules are an optional feature to access the web or enterprise VPN at high-speeds

lenovo
(Formerly IBM's PC Division)

Panasonic

hp invent

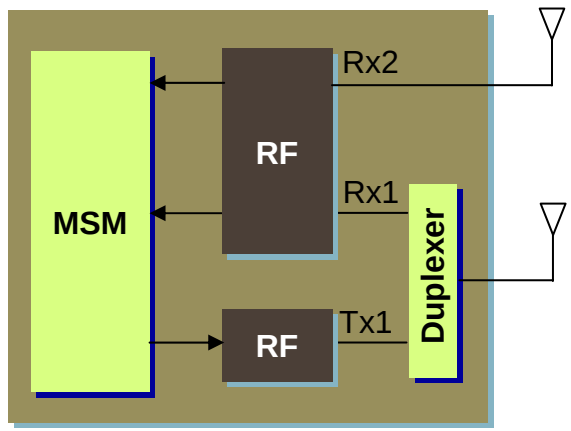
DELL

Mobile Receive Diversity Improves Performance

- Doubles voice capacity of 1X & EV-DO
- Significantly increases data rates
- Significantly increases sector capacity
- Backwards compatible
- No new standards required

Commercial 2-Rx Diversity Handsets

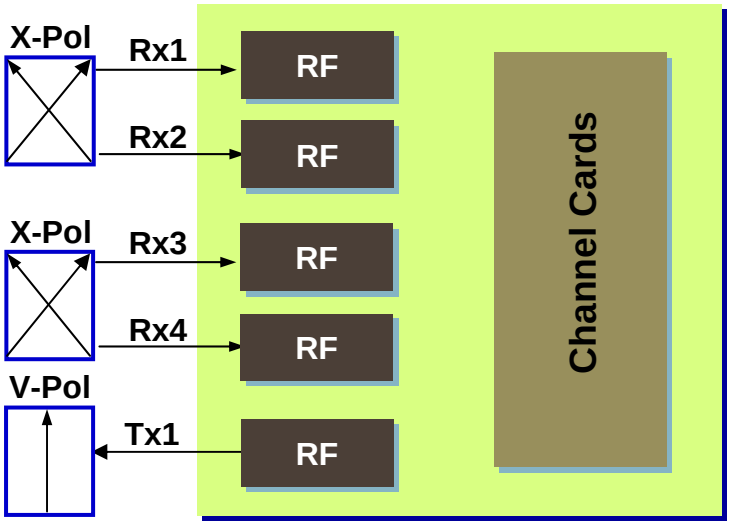
2 antennas in the mobile phone



Mobile Receive Diversity
Device with 2 Rx chains

Base Station Receive Diversity Improves Performance

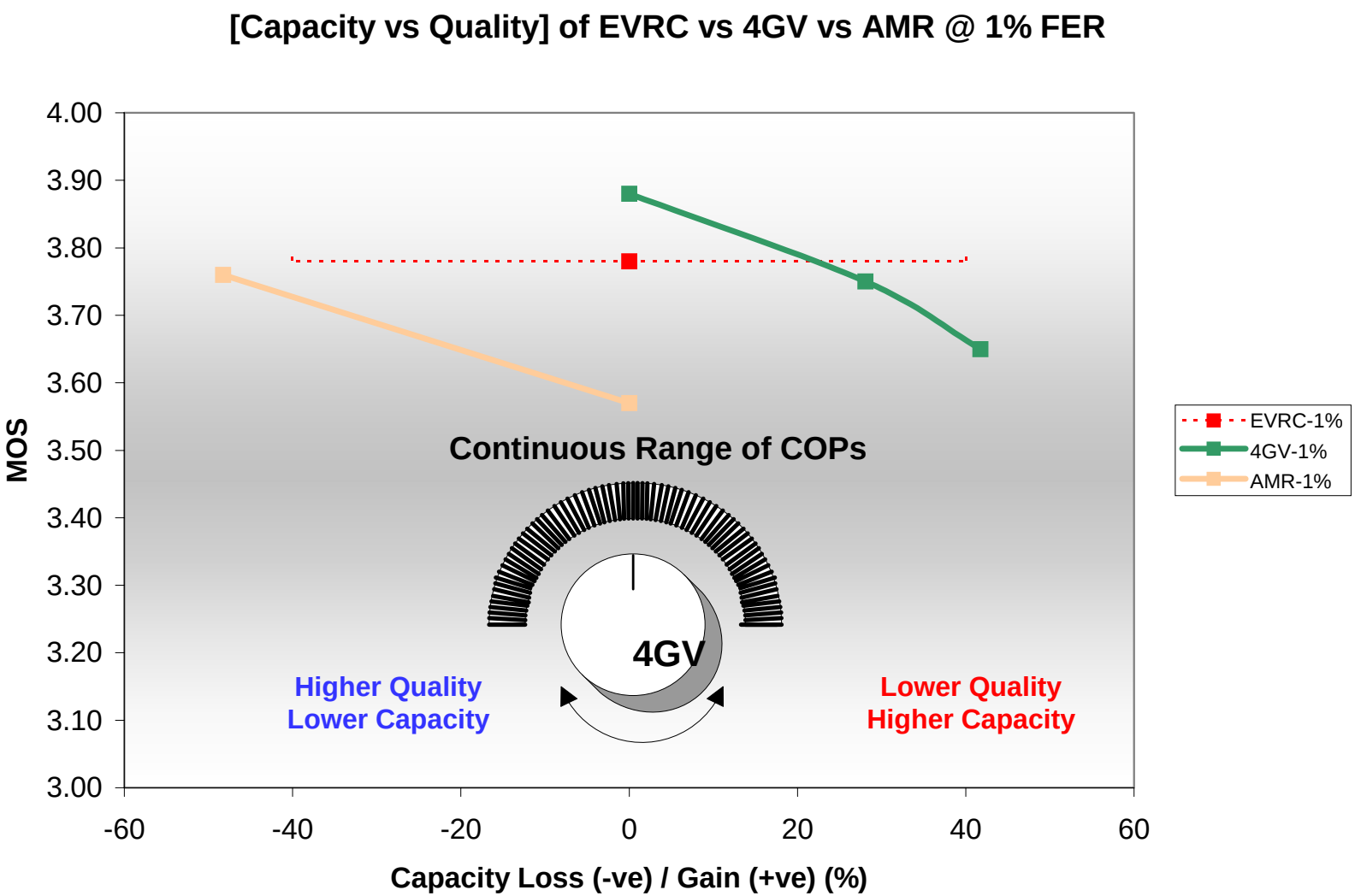
2 pairs of spatially separated cross-polarized antennas provide 4-branch RX diversity



- Yields much higher sector capacity: even larger than gain from device diversity
- Same network topology and RF plan
- No new standards
- Can be rolled out incrementally as needed

4GV – Fourth Generation Vocoder

Integrating Narrow Band, Wideband and VOIP Speech Codec Solution



Pilot Interference Cancellation (PIC)

- For low data rate applications (e.g. VoIP, PTT), where many devices transmit at same time, a significant portion of BTS received power is from reverse link (RL) pilots

- Removal of pilot interference increases capacity
- For example, VoIP experiences ~15-20% reverse link capacity gain
- No standard changes required
- Can be rolled out incrementally as needed

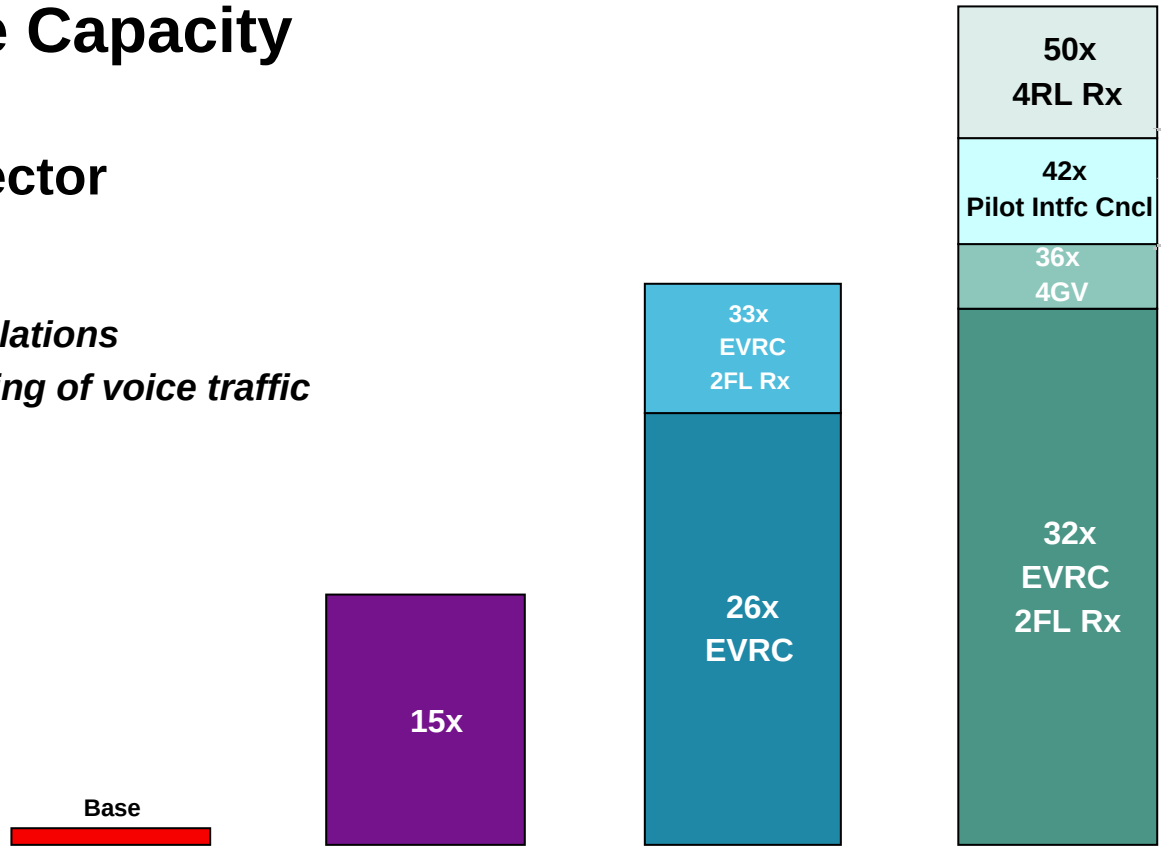
Growing Voice Capacity

Erlangs Per Sector

(2x10MHz)

2% GOS for all calculations

Assumes 100% loading of voice traffic



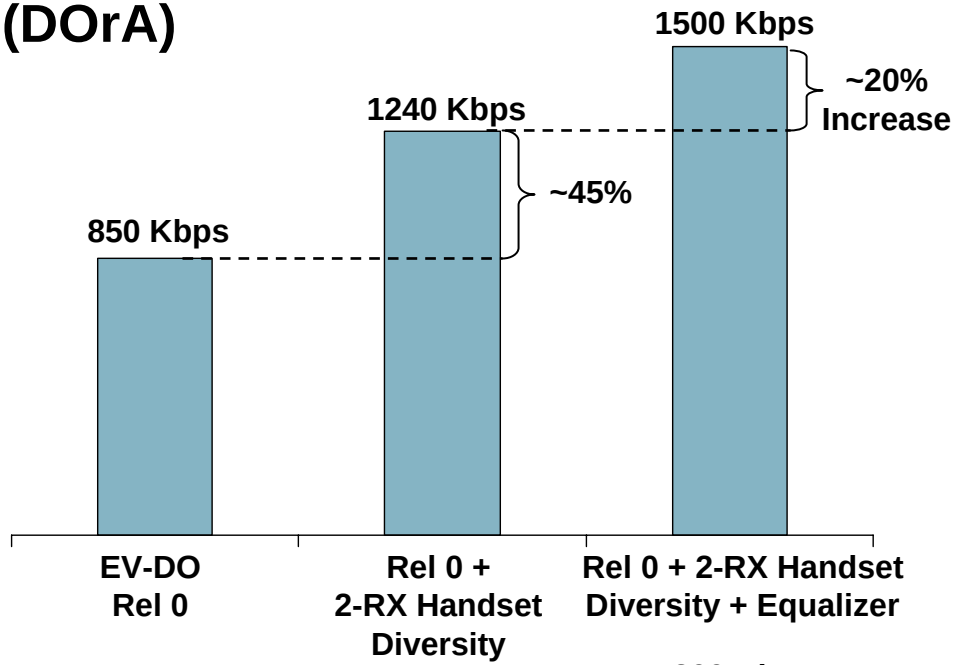
	AMPS	cdmaOne	1X [1]	DOrA VoIP [2]
Erlangs/Sector	9	134	231 - 297	287 - 448
Users/Sector	16	147	245-462	301-462
Frequency Reuse	7/21	1/1	1/1	1/1

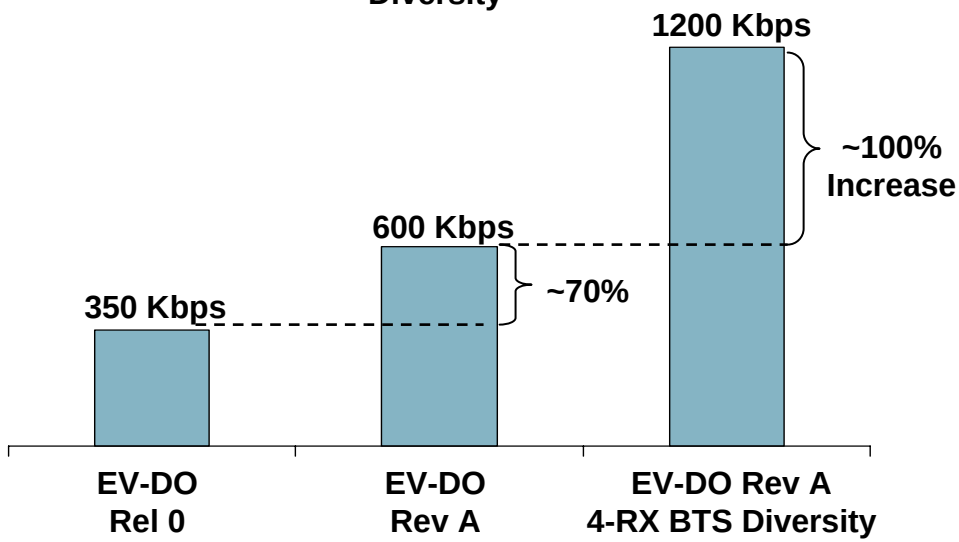
1. "Further Capacity Improvements in CDMA Cellular Systems", QUALCOMM Inc, Roberto Padovani, Assumes 2-way Rx Div at handset and 4-way Rx Diversity at BTS. 4GV Capacity Operating Point 2
2. QUALCOMM simulation, 4GV Capacity Operating Point 2

Packet-only Carrier Throughput Improvements to Spectral Efficiency
VOIP Supported by DO Rev A (DOrA)

Downlink

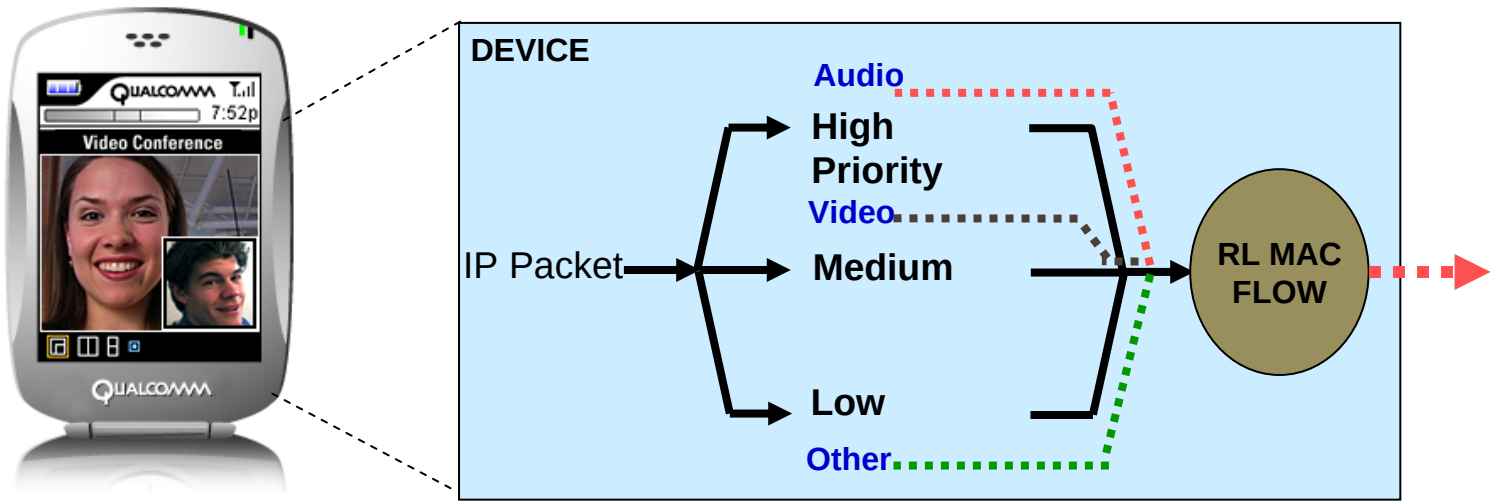
Uplink





Quality of Service, QOS: Packet Based Video Telephony

- Full duplex service with audio, video, and control flows
- More efficient than circuit switched
- More freedom in balancing available bandwidth and video quality
- Easier integration with other packet-based services (e.g., IM)
- Introduces Additional Flexibility in Pricing Plans



Increasing Convergence With Consumer Electronics


Voice


Walkie-Talkie


PDA

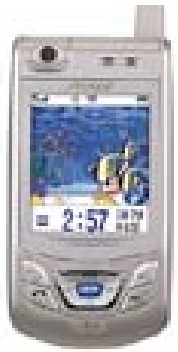

Television


Camcorder


Photo Album


Glucometer


Camera




Wallet


FM Radio


Game Console


Bar Scanner


PC


MP3 Player


Newspaper


GPS Device


Rolodex

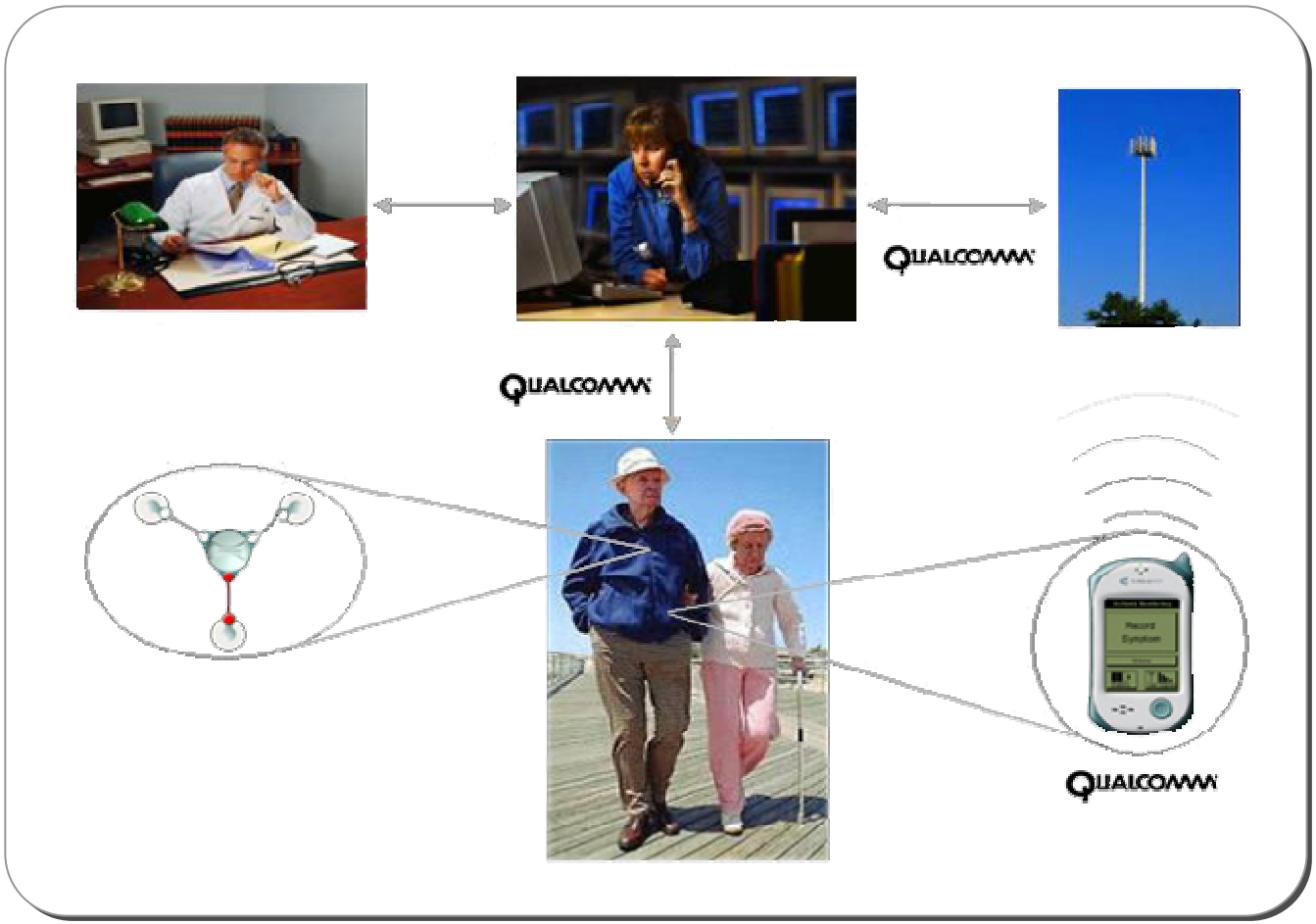

Pager

Korea's KTFreetel Diabetes Phone: LGE and Healthpia

Glucometer cell phone & service for managing diabetes remotely

CardioNet: Cardiac Monitoring Service --

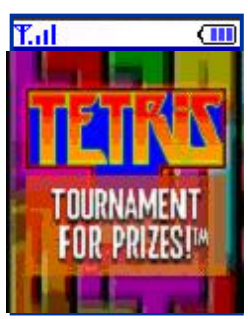
Enabled by QUALCOMM's Wireless Network Management Services

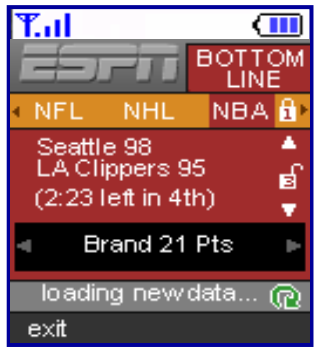


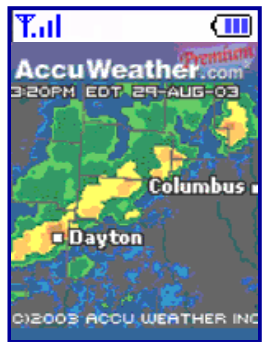
CARDIONET
MONITORING AT THE SPEED OF LIFE

BREW Applications

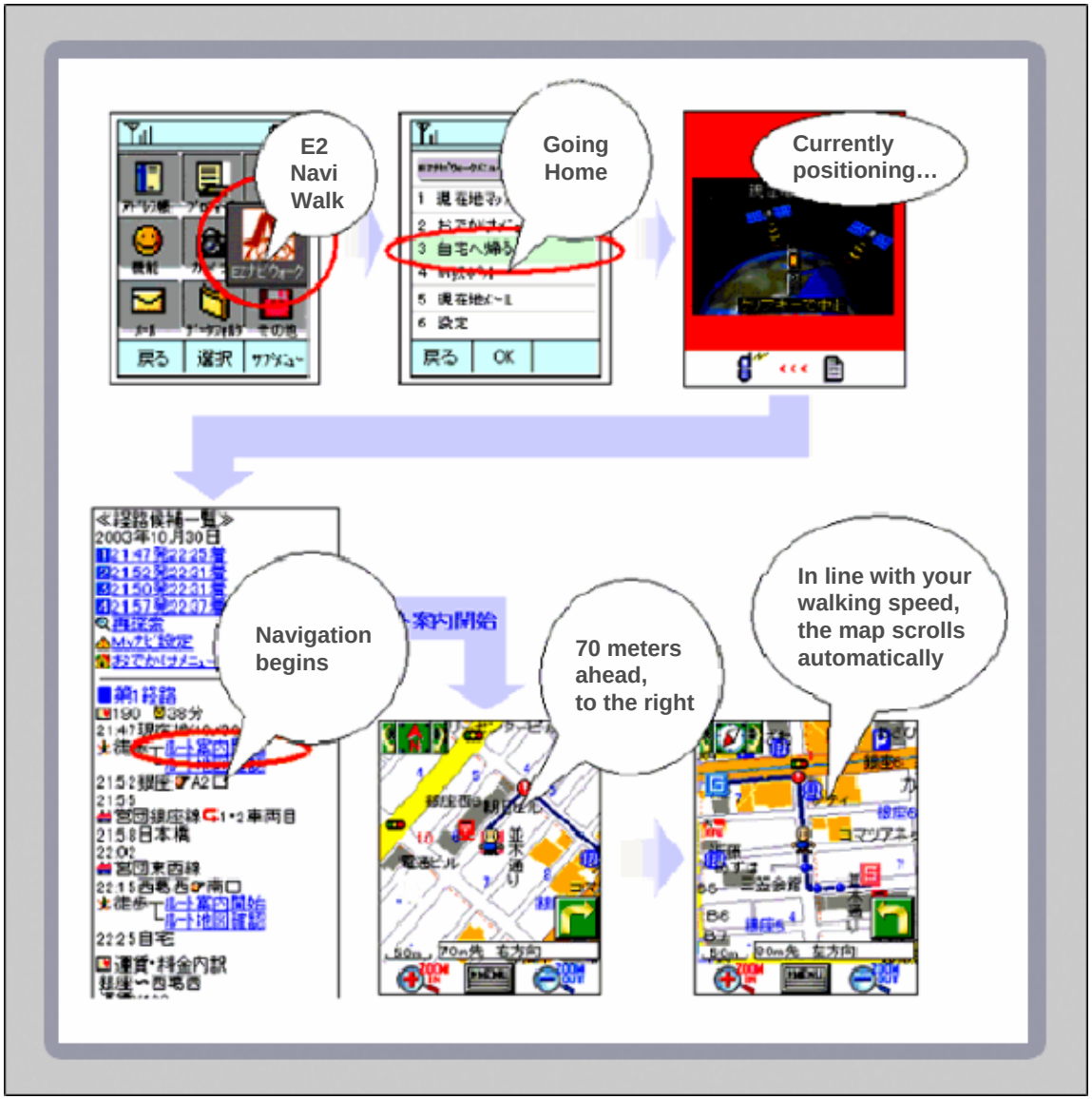
- Games and Entertainment
- Information and News
- LBS
- Productivity
- Communication
- mCommerce
- Enterprise







KDDI EZ Navi Walk



Sprint Nextel Customizes Handsets with BREW uiOne Themes

- 'Skins' (user interfaces) for standby screen, main menu and favorites and link to other Theme-related multimedia and online content, (ringers, screensavers and other premium content)

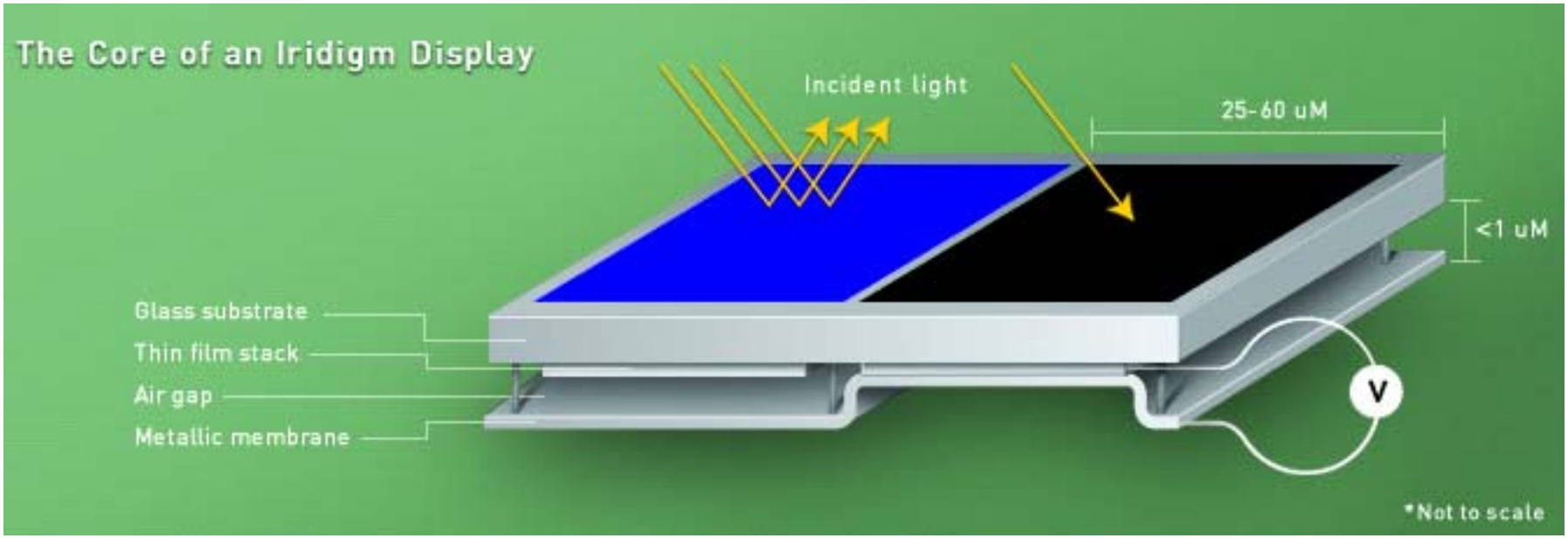
- Customize by changing outside color accent plate

Power VisionSM Phone
MM-7500 by SANYO

The Third Screen is Here and Always With You

Movie Screen → TV Screen → Phone Screen

MEMS-based iMOD Lowers Display Power Consumption



Strengths vs. LCDs

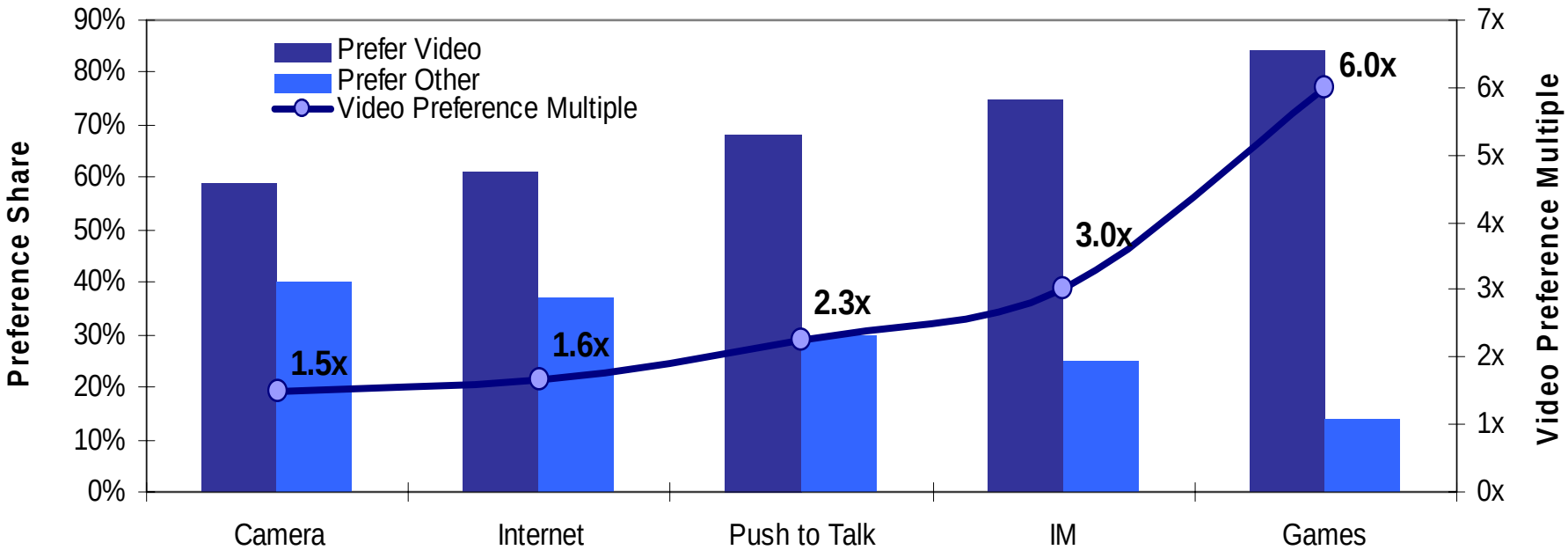
- ✓ Much simpler technology
- ✓ Near zero power for static images
- ✓ Lower power for moving images
- ✓ Lower cost for similar quantities
- ✓ High contrast and visibility
- ✓ High response speed
- ✓ Operates over greater temperature range

Power advantages range between 50% and 300% depending on lighting requirements and viewing mode

High Reflectivity of iMoD

- LCD TFT transflective and reflective
- QUALCOMM iMoD reflective

Interest in Video Outstrips Other Cell Phone Features



Video functionality second only to voice

- 1.5 to 1 preference for video services over camera phone
- 2.3 to 1 preference for video services over push-to-talk

Source: Consumer Preference Index Video vs. Alternate Features; Primary research results conducted by Spear & Associates, sample of 2,800 cell phone and cable users & nationwide focus groups

MediaFLO

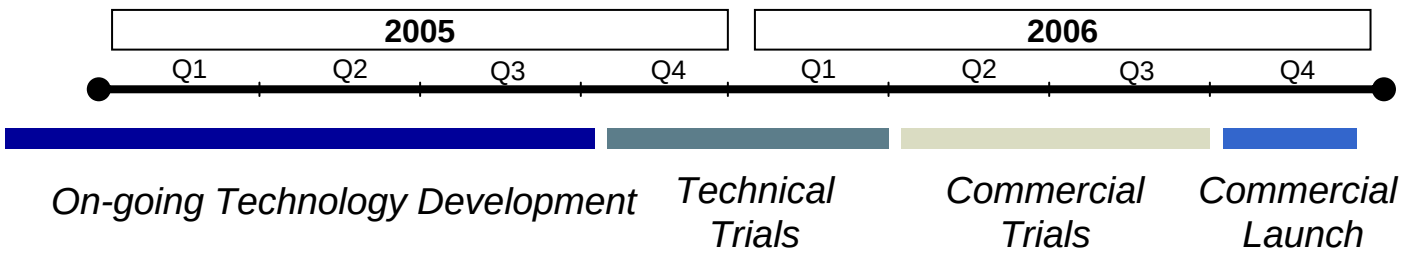
MediaFLO “now playing” interface

MediaFLO™

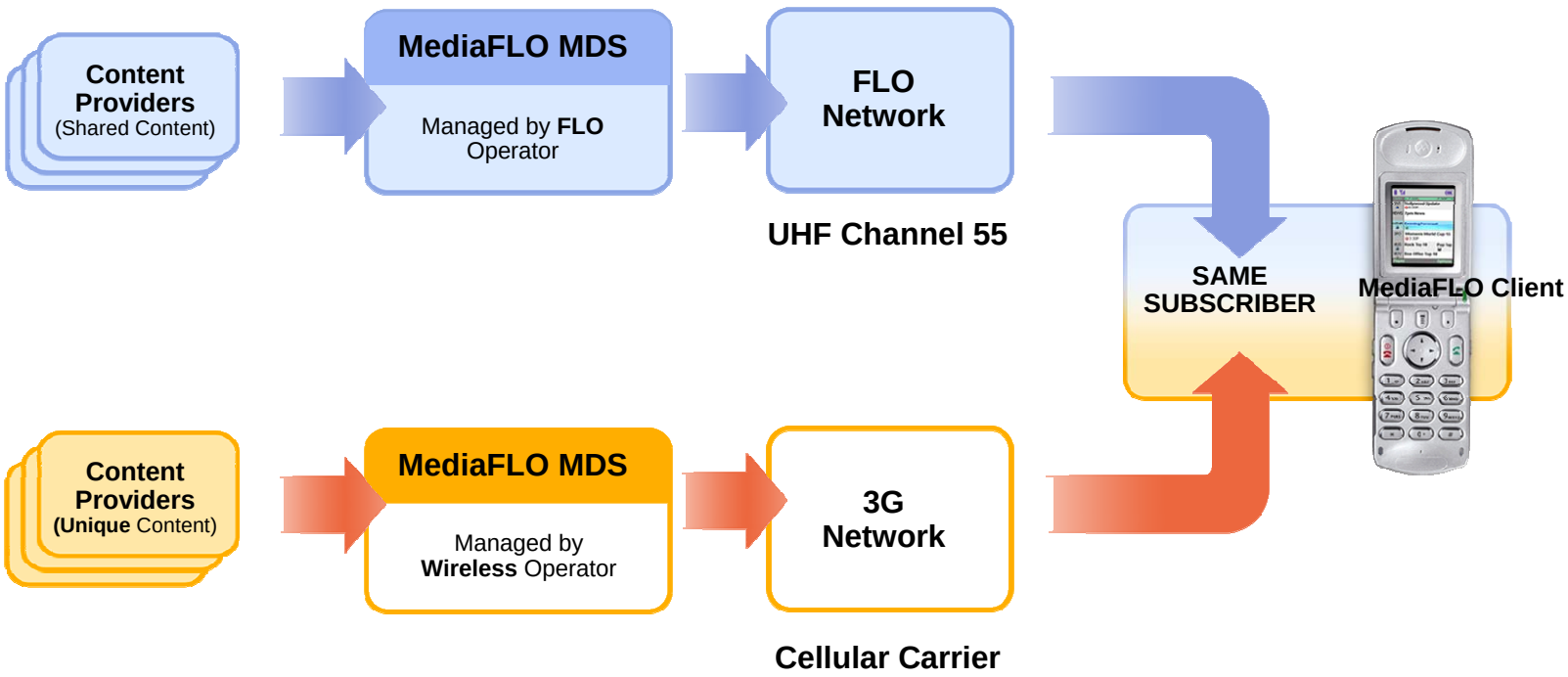
MediaFLO

- **Forward Link Only (FLO™) Technology: a new OFDM air interface**
- **Media Distribution System (MDS)**
- **MediaFLO USA Inc network operator & service provider**

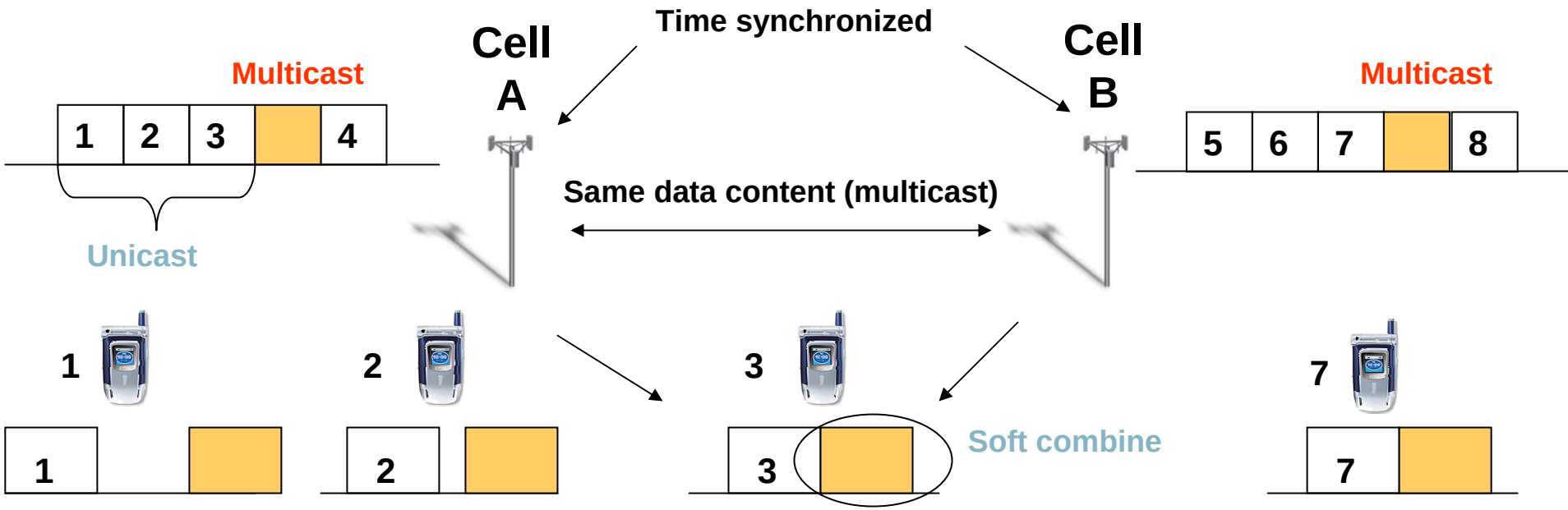
Verizon to be 1st U.S. operator to launch MediaFLO



Integrated Service Across Multiple Networks



Platinum Multicast – Time Slot with OFDM Modulation



- **Flexible design**
- **Percent of bandwidth can be changed dynamically**
- **Backwards compatible**

Layered Modulation

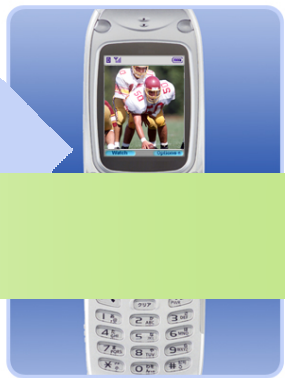
Supports transmission of base and enhancement layers with different levels of robustness

- Used in conjunction with layered source coding to extend coverage area
- Provides a more graceful degradation of reception, as compared to a single grade of service

Transmission Tower

Enhancement Layer
30 frames/ second
(maximum)

Base Layer:
15 frames/second
(minimum)



Subscriber A
(receives base layer and enhancement layer signals)

Base Layer:
15 frames/second
(minimum)

Subscriber B
(receives base layer signal)

MediaFLO™

MediaFLO Handset

- Additional receive chain for FLO services
  - MBD1000 + RBR1000
- Existing modem ASIC for H.264 decode
- MediaFLO Client Software
- CDMA2000 and WCDMA

MediaFLO™

Diverse Content Distribution Possibilities

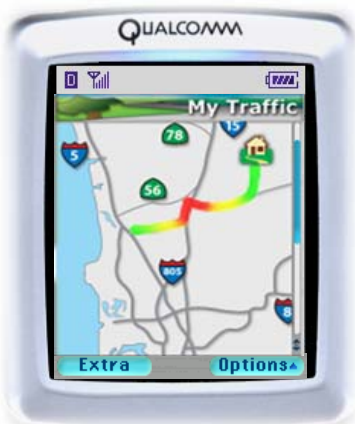
Video / Audio

Gamecasting

Data Channels / RSS

Weather

Stock Ticker

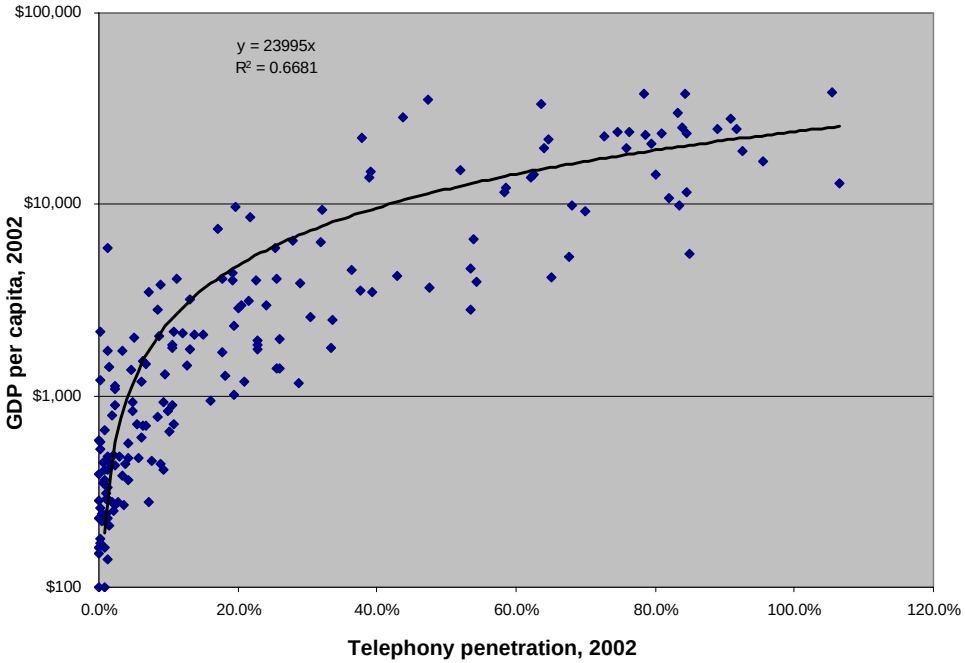


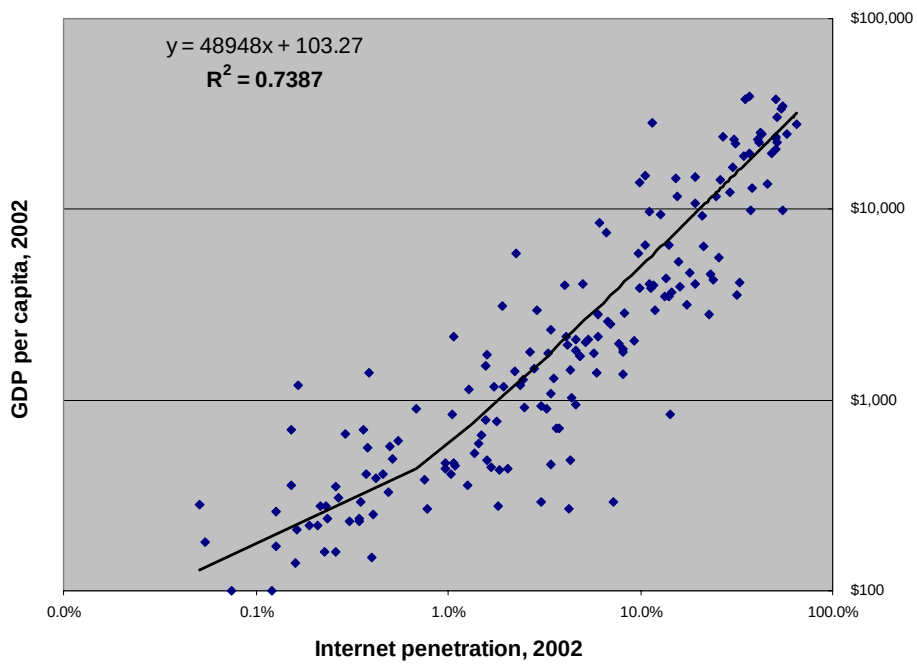
Traffic

Wireless Connectivity in Developing Nations

Impact of Telephony and Internet Connectivity

It's not just about voice… It's about voice & data (Differentiated Services)





For each 1% increase in telephony penetration, GDP per capita goes up by US$240

For each 1% increase in Internet penetration, GDP per capita goes up by US$593

Offering differentiated services (voice, Internet access, multimedia, etc.) via advanced wireless networks will boost India's economic growth

Broadband access business models benefit from leveraging voice revenues

Source: Michael Minges, TMG Telecom, and ITU World Telecommunications Database Statistics, 2003.

Tata Indicom – Non-Stop Mobile Unlimited Incoming Calls

- Receive unlimited incoming calls without recharging
- No commitment to recharge every month
- Recharge with any voucher, anytime, and get 100% talktime

- First in wireless net additions (23% Net Adds share)
- 5th place in overall Indian Wireless Market

Voice and Data Becoming Ubiquitous

Mobile Web surfing via CDMA2000 1X data cards on Reliance network in India

3G for Wireless Broadband Access
CDMA2000 1xEV-DO at 450 MHz: Pilot Project in Brazil

Partnership between Lucent and Anatel (Brazilian telecom regulator) to demonstrate CDMA2000 1xEV-DO broadband data capabilities and coverage at lower frequencies for universal broadband access

High Tech High Charter School – San Diego, CA

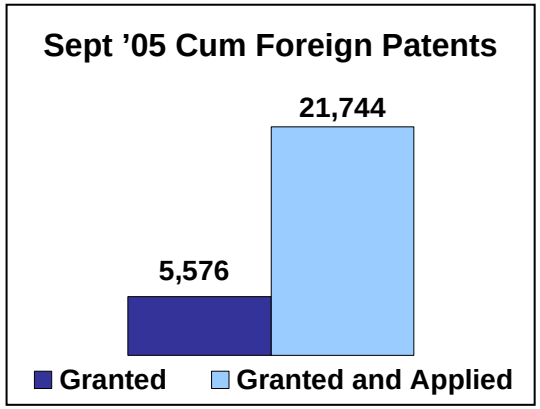
Innovation in Public Education

- Launched in September 2000 by an industry and educator coalition
- Small, diverse learning community
- Admission by Lottery
- Founded on three design principles:
  - personalization, adult-world connection, and a common intellectual mission

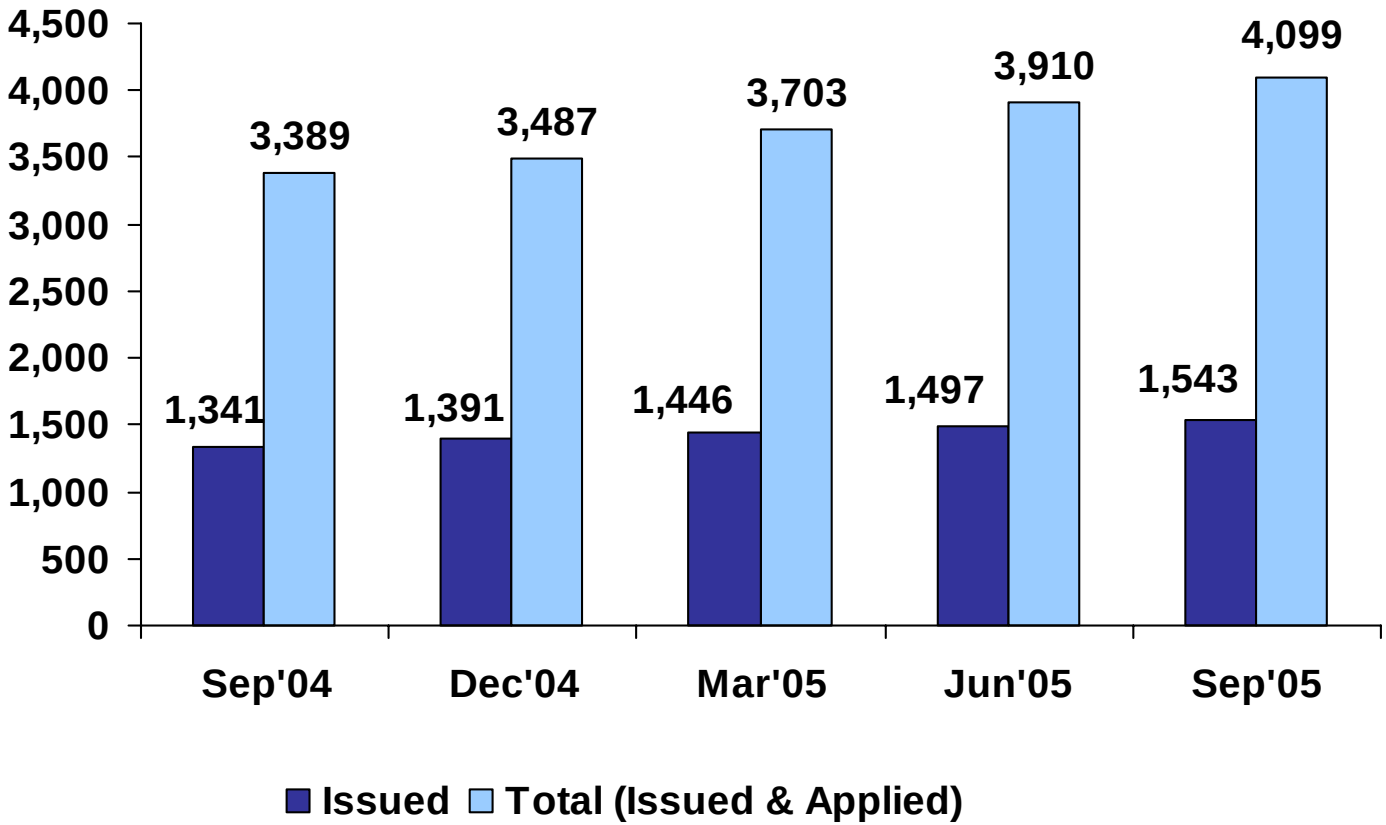
HTH Schools San Diego– a Snapshot in 2004-05

- 3 schools operational (2 high schools and 1 middle)
- 1040 students, 90 employees
- All schools have API base scores above 800
- 100% of graduates headed off to college
- $22 million in real estate holdings
- All schools operate as LEAs for purposes of special education
- 12 teachers enrolled in HTH teacher certification program

QUALCOMM Continues to Innovate



Cumulative U.S. Patents (Issued Patents & Filed Applications)
(Excludes non-U.S. filed applications and granted patents)



Financial Highlights – Fiscal 2005

- **Record revenues**
  - **$5.67 Billion, up 16% YOY**
- **Record net income**
  - **$2.14 Billion, up 25% YOY**
  - **$1.97 Billion, up 9% YOY (Pro forma*)**
- **Record EPS**
  - **$1.26 GAAP, up 22% YOY**
  - **$1.16 Pro forma*, up 8% YOY**
- **Record operating cash flow**
  - **$2.7 Billion operating cash flow****

***Pro forma results exclude the QSI segment and one-time tax benefits recorded in Q2'05 and Q3'05 and are presented as if the New Method of recording royalties was in use during FY2004. FY2004 results have also been adjusted to conform to new segment presentation for the reorganization of MediaFLO into the QSI segment during Q1'05**

****Defined as net cash provided by operating activities**

Strong Balance Sheet

- Liquidity for Significant Opportunities Ahead
- Returning Value to Shareholders Through Dividends and Buybacks

($Billions)	Sep 2004	Sep 2005
Cash & Marketable Securities	$7.6	$8.7
Receivables, Inventory	$0.7	$0.7
Fixed Assets & Goodwill	$1.0	$1.6
Deferred Tax Assets & Other	$1.5	$1.5
Total Assets	$10.8	$12.5
Total Liabilities	$1.1	$1.4
Stockholder Equity	$9.7	$11.1
Total Liabilities & Stockholder Equity	$10.8	$12.5

Impact of Execution - Recognition

8th Consecutive Year

FORTUNE 100 BEST COMPANIES TO WORK FOR 2005

S&P 500

Forbes 2004 THE PLATINUM LIST

FT.com FINANCIAL TIMES

68th World's biggest public companies, FT Global 500

Training TOP 100

BestBig Companies IN AMERICA

7 years on Forbes list

NASDAQ®

InformationWeek 500

CIO 100

THE WALL STREET JOURNAL.

Corporate Citizen Group

The 2005 FORTUNE 500

100 BEST Corporate Citizens 2002 BUSINESS ETHICS

FSA

4th Consecutive Year
Best Financially
Managed Company

INDUSTRYWEEK IW LEADERSHIP IN MANUFACTURING

THE INFOTECH 100 BusinessWeek

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2004

EDD Employment Development Department State of California

San Diego Society For Human Resource Management Workplace Excellence

What does the future Hold?

• LISTEN TO YOUR FAVORITE SONG • TAKE A PHOTO • SHOOT A HOME MOVIE
• SEND A VIDEO CLIP • PLAY 3D GAMES • FIND A RESTAURANT
• WATCH YOUR TEAM SCORE • SELL STOCK • PURCHASE A TRAIN TICKET

It’s up to your imagination!

Thank you