



World DRAM Market Overview

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DRAM Product trends

New products for new market requirements

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Memory Application Market

Markets

Computing

Infrastructure

Infocom

Entertainment



Applications
(Selection)

- Desktop PC
- Notebook PC
- Workstation
- Graphics
- Thin Client
- Periph.
 - Scanners
 - Printers
 - Others

- Server
- Networking
 - Routers
 - Switches
- Storage
 - SAN
 - NAS
 - DAS

- Mobile Phone
- Smart mob. Phone
- Feature mob. Phone
- PDA
- Web pad
- Car Navigation

- Game Console
- Set-Top-Box
- Camcorder
- DVD-Player
- DVD-ROM
- CD Player
- Dig. TV
- DSC*
- Dig. Projector
- eBook

* Digital Still Camera

Drivers

Internet Access
Versatility
Performance
Faster Replacement

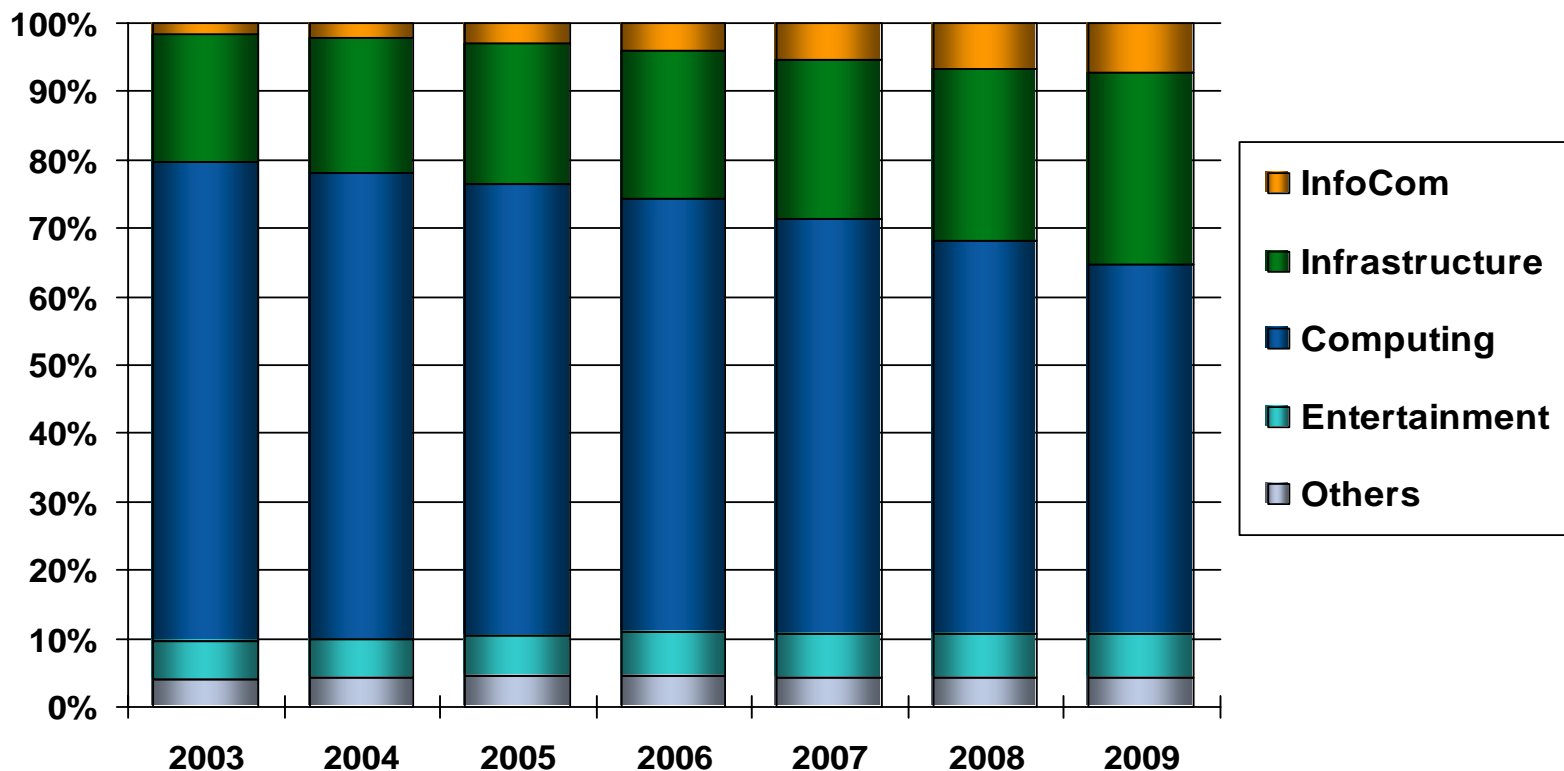
Internet
Infrastructure
e-Commerce
ECRM
Data Warehouse
Media Merchants

Internet Access
Mobility Need
Technology Push
Lifestyle
Convenience
New Services

New Games
Performance
Internet Access

Development of DRAM Demand by Market Segment

Demand by Application (in total DRAM bit demand)



Market in
256M eq. 2003

Growth rate (bits)

CAGR 03 09

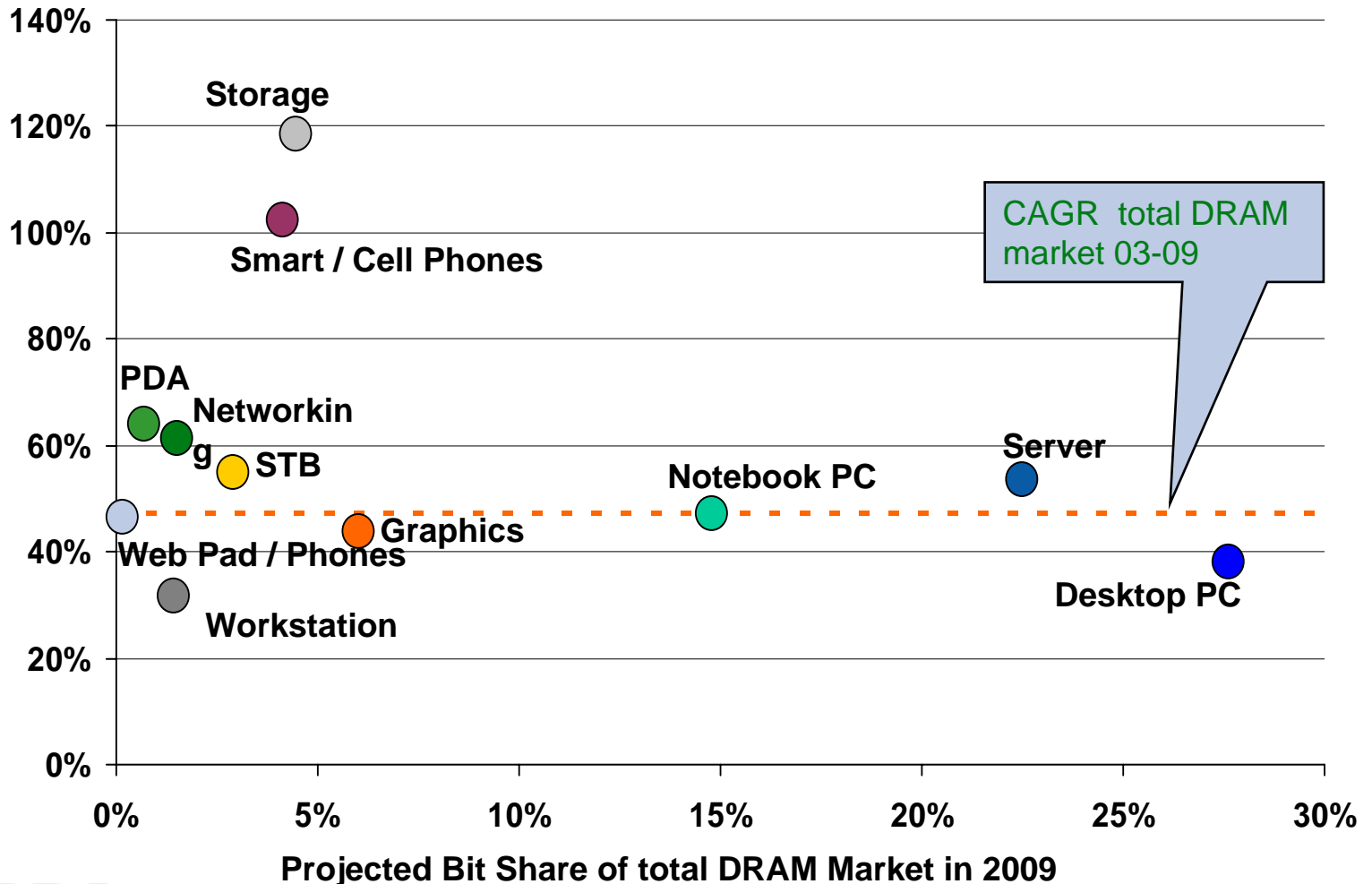
3211 M

53% 50% 46% 47% 44% 42%

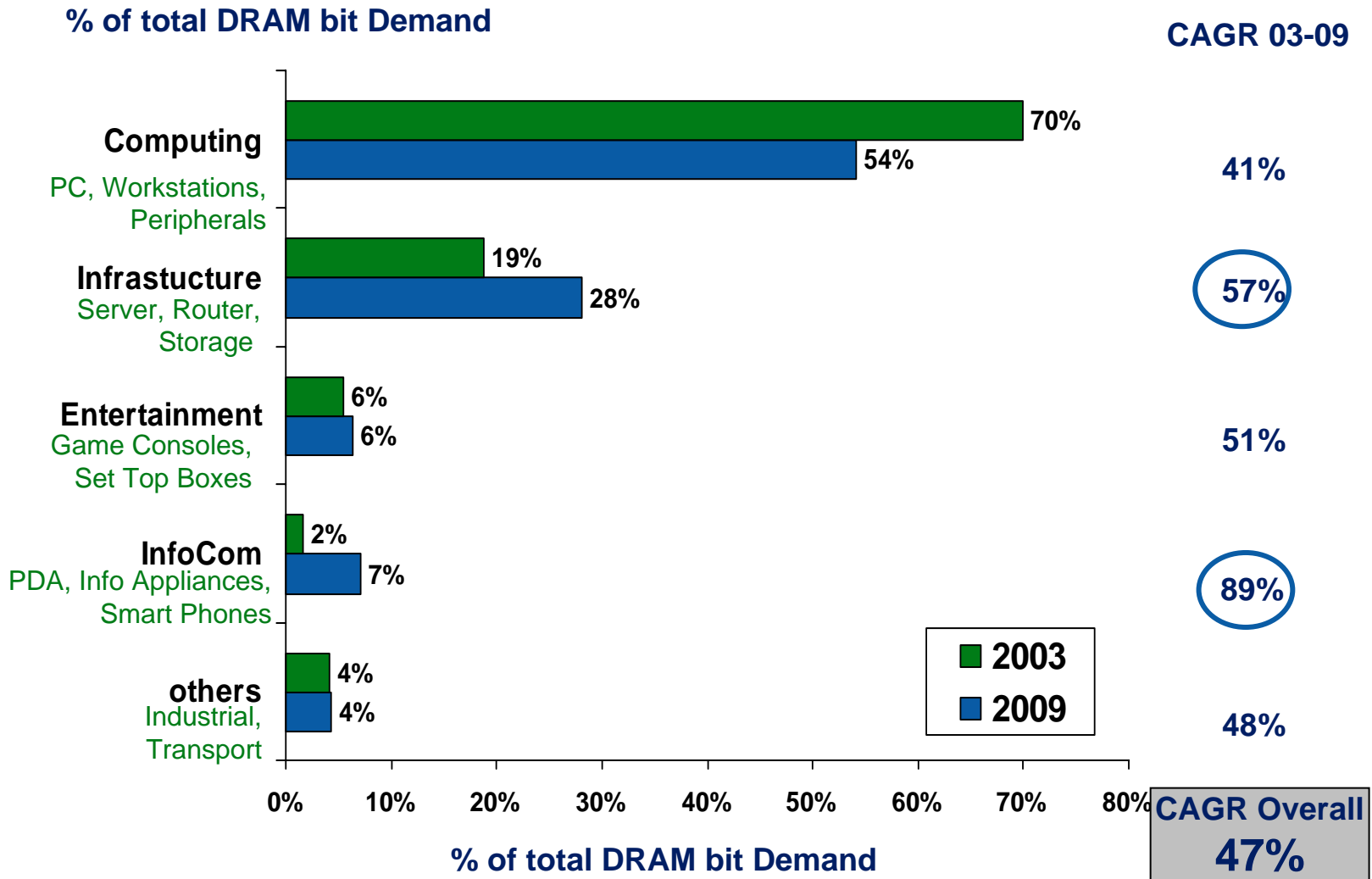
47%

Development of DRAM Demand by Application

CAGR of DRAM Bit Demand 2003-2009



Development of DRAM Demand by Market Segment



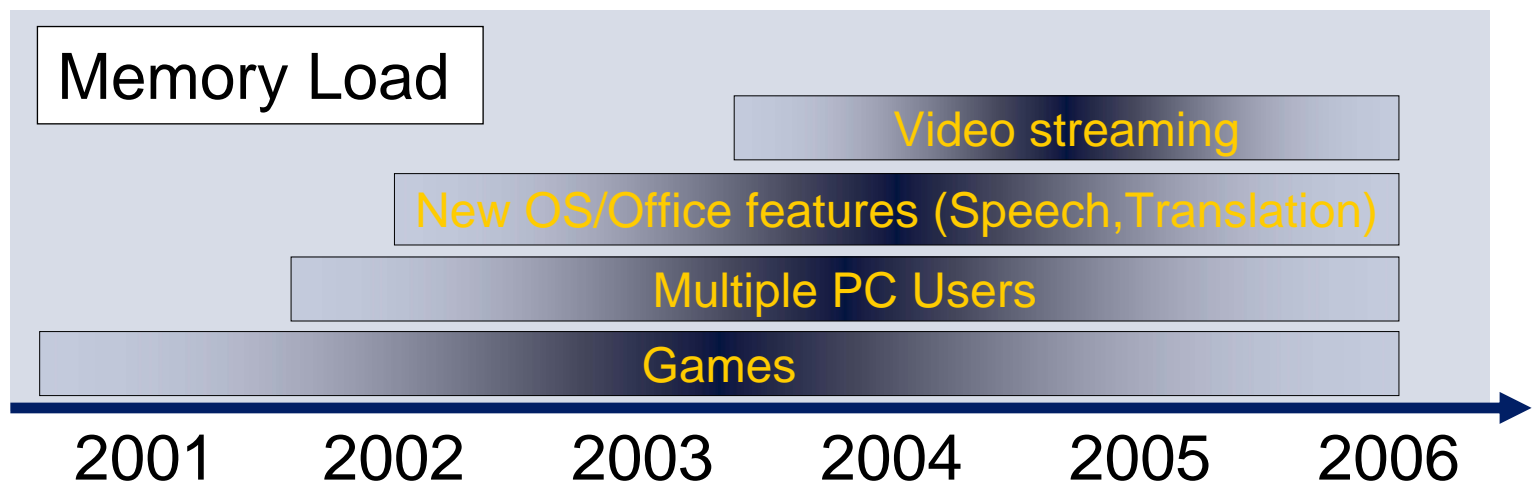
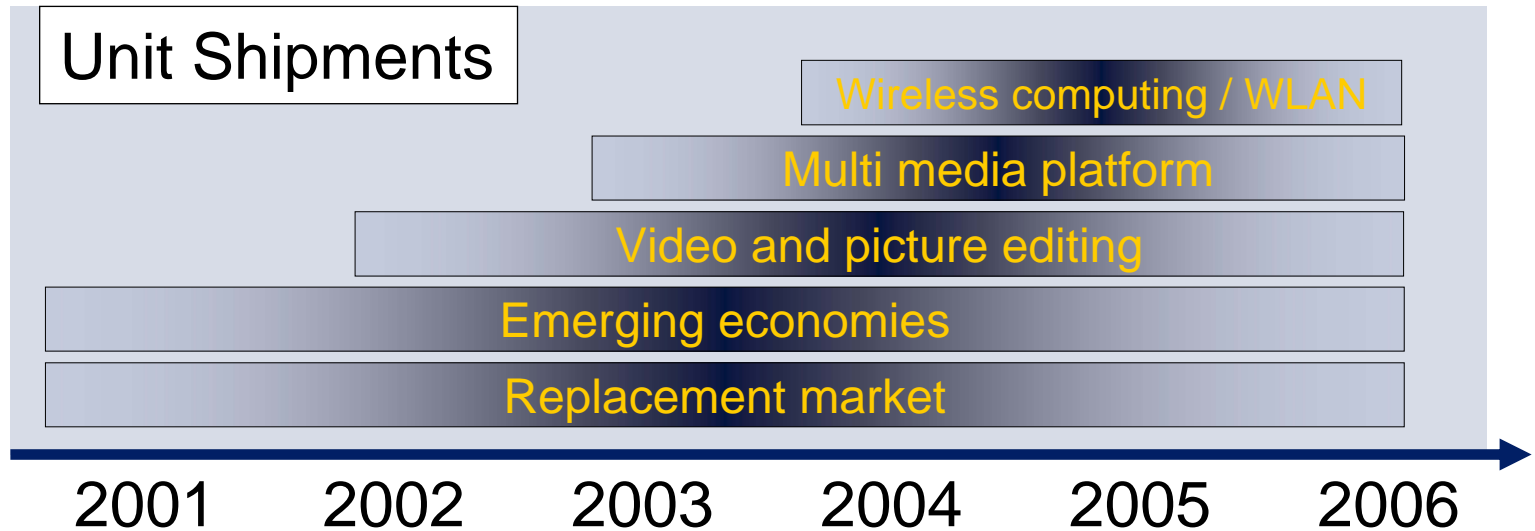
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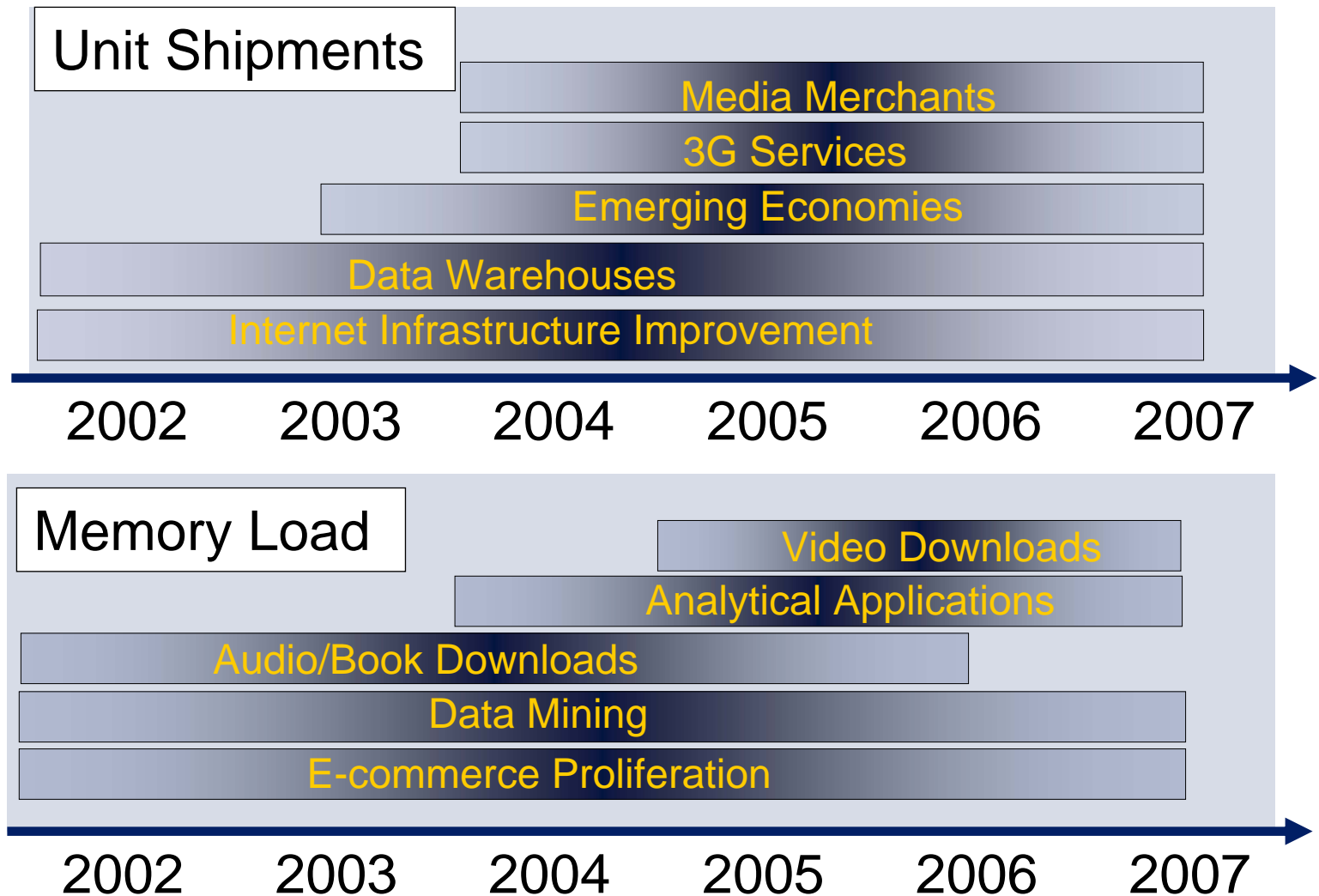
DRAM Product trends

New products for new market requirements

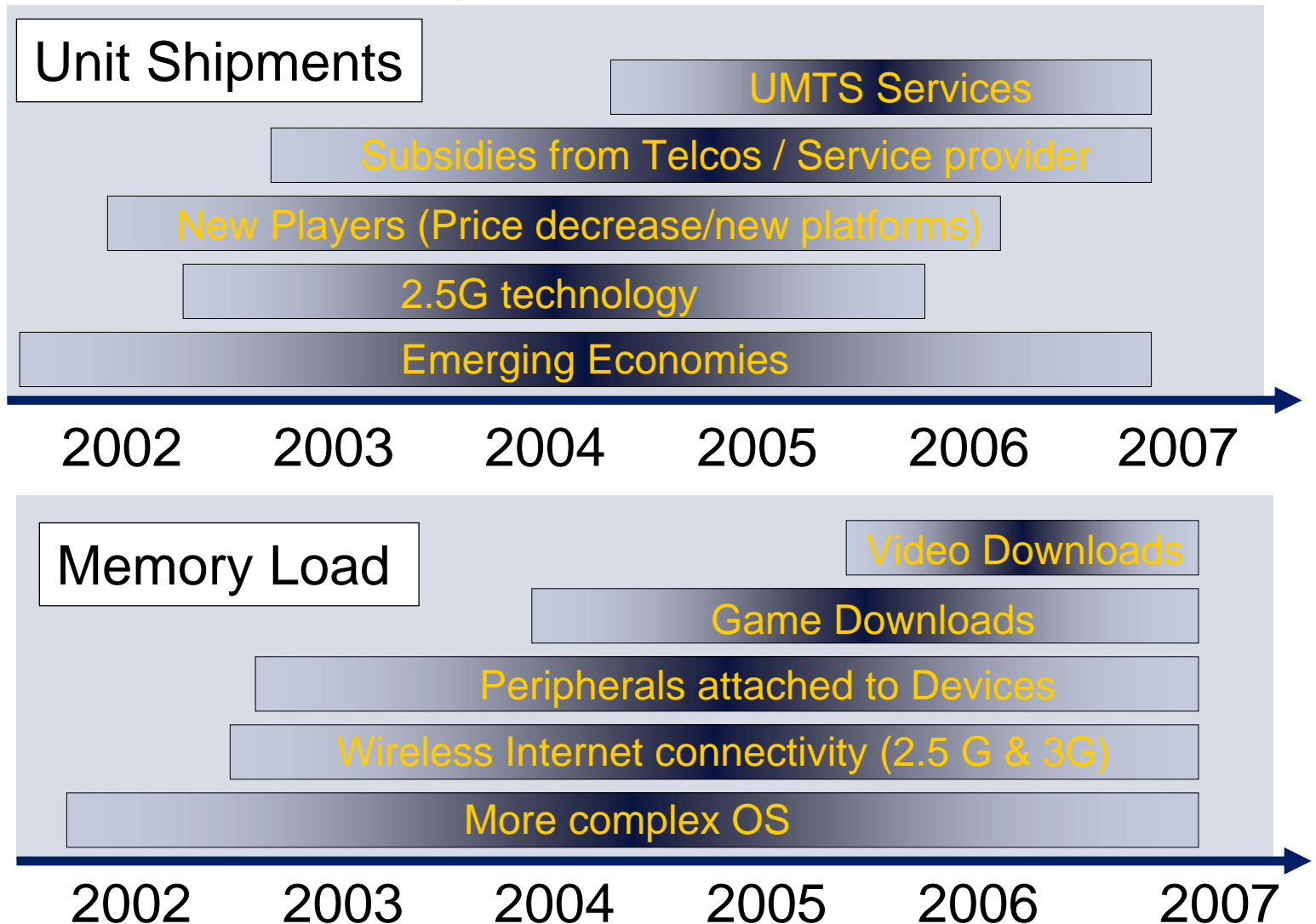
Market Drivers in the Computing Segment



Market Drivers in the Infrastructure Segment



Market Drivers in the InfoCom Segment








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Application Synergies Specialty DRAMs

		<i>DRAM</i>	<i>PSRAM</i>	<i>NOR Flash</i>	<i>NAND Flash</i>
PDA		✓		(✓)	✓
Smart Phone		✓	✓	✓	✓
Feature Phone		(✓)	✓	✓	✓
Digital Camera		✓	✓	(✓)	✓
MP3		✓		(✓)	✓

MOBILERAM

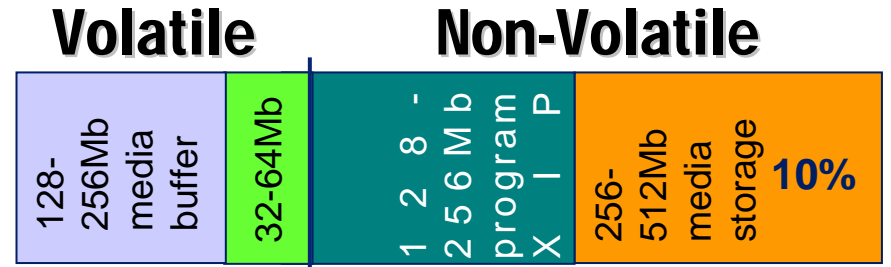
CellularRAM™

Market Segments and Share in 2004

Features wander down the segments annually

SMART PHONES

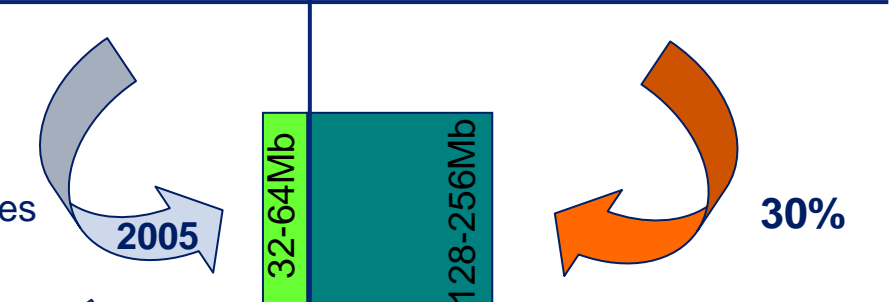
- Open OS
- high connectivity
- >=2Mpixel camera
- 2D graphics



Operator driven Time to market New Services, Features & Gimmicks Drives the replacement market

FEATURE PHONES

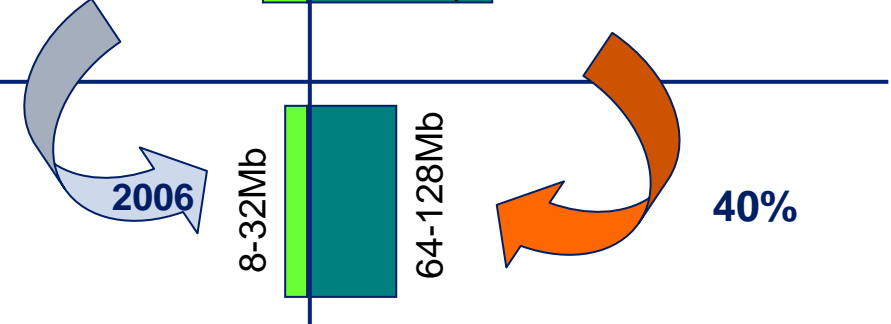
- partly Open OS
- features drive cost
- Mpixel camera
- poly ringer 64 voices
- MP3/ FM Radio
- color screen



New subscribers in emerging markets/ Wireless Modules

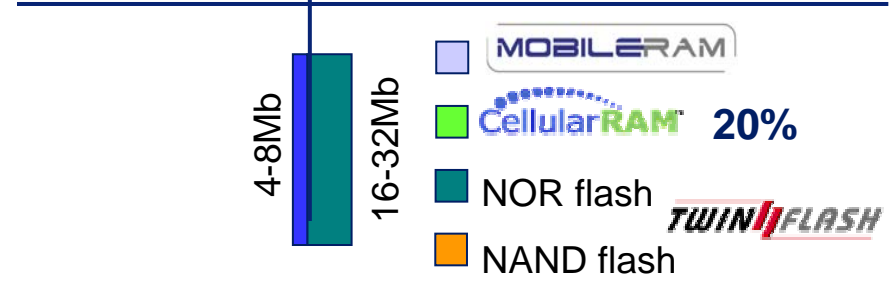
BASIC PHONES

- RTOS
- costs drive features
- VGA camera
- MMS

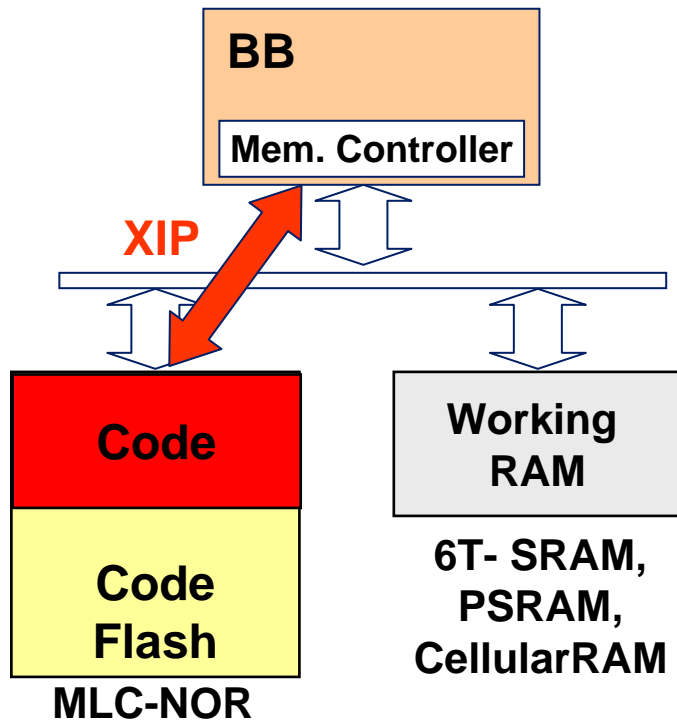


ENTRY PHONES

- Voice-centric
- RTOS
- SMS

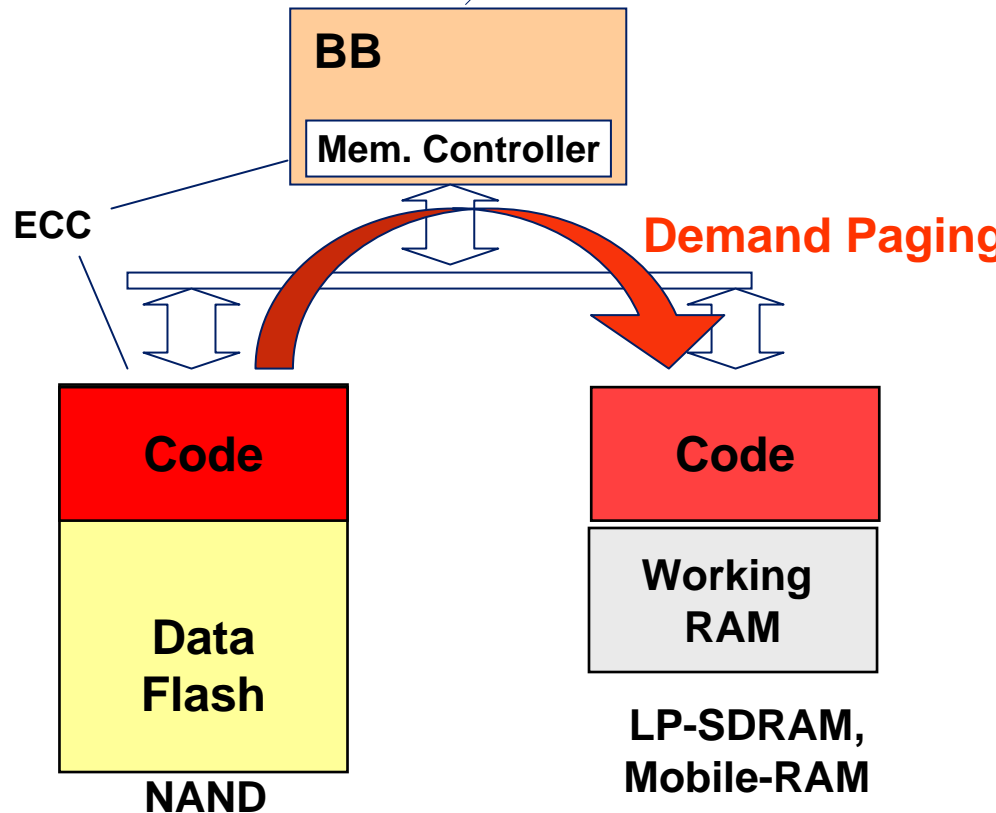


NOR vs NAND Based Mobile Applications

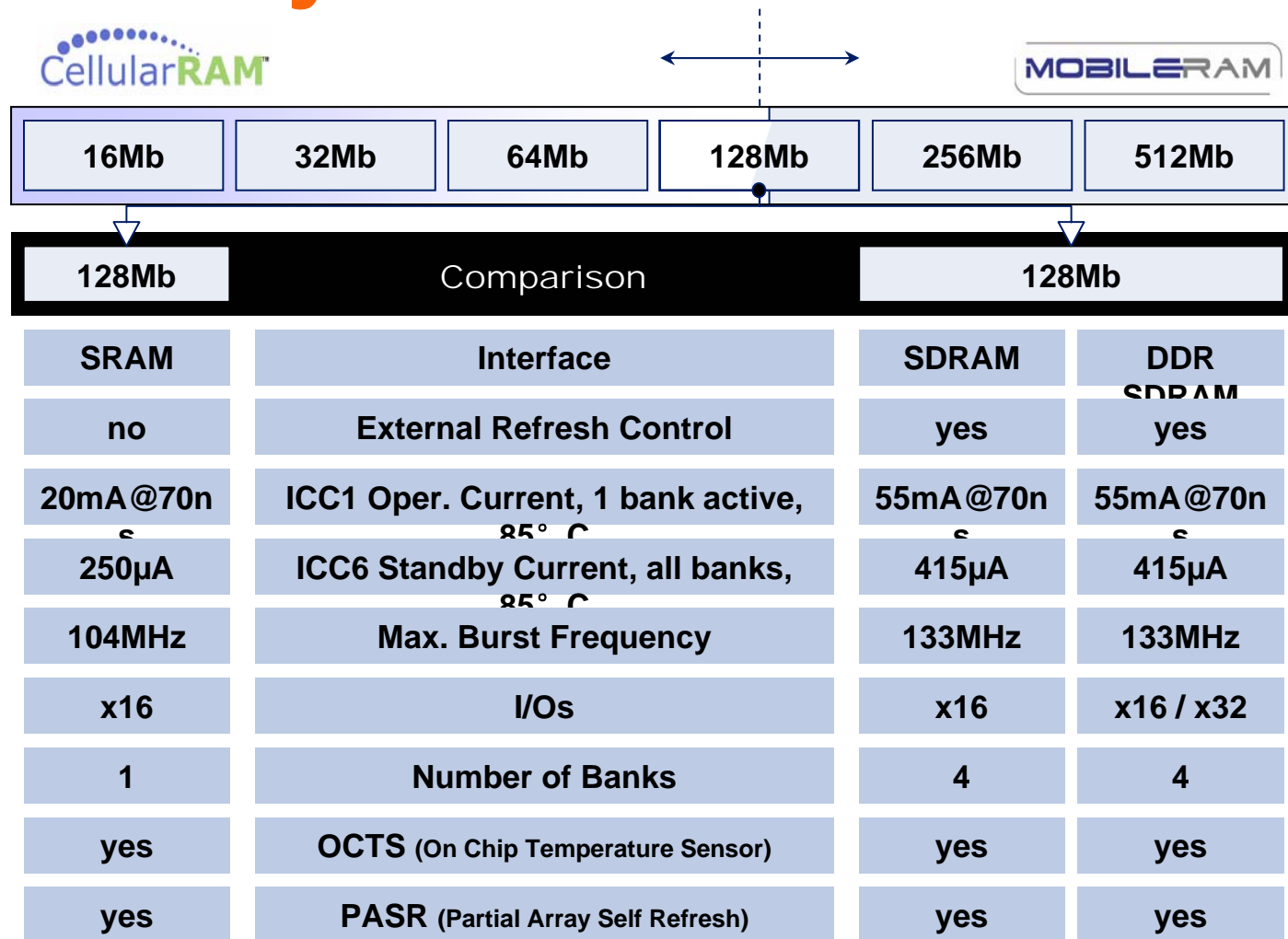


- XIP= Execution in Place
- program code is executed out of Flash
- requires less RAM space
- power optimized solution

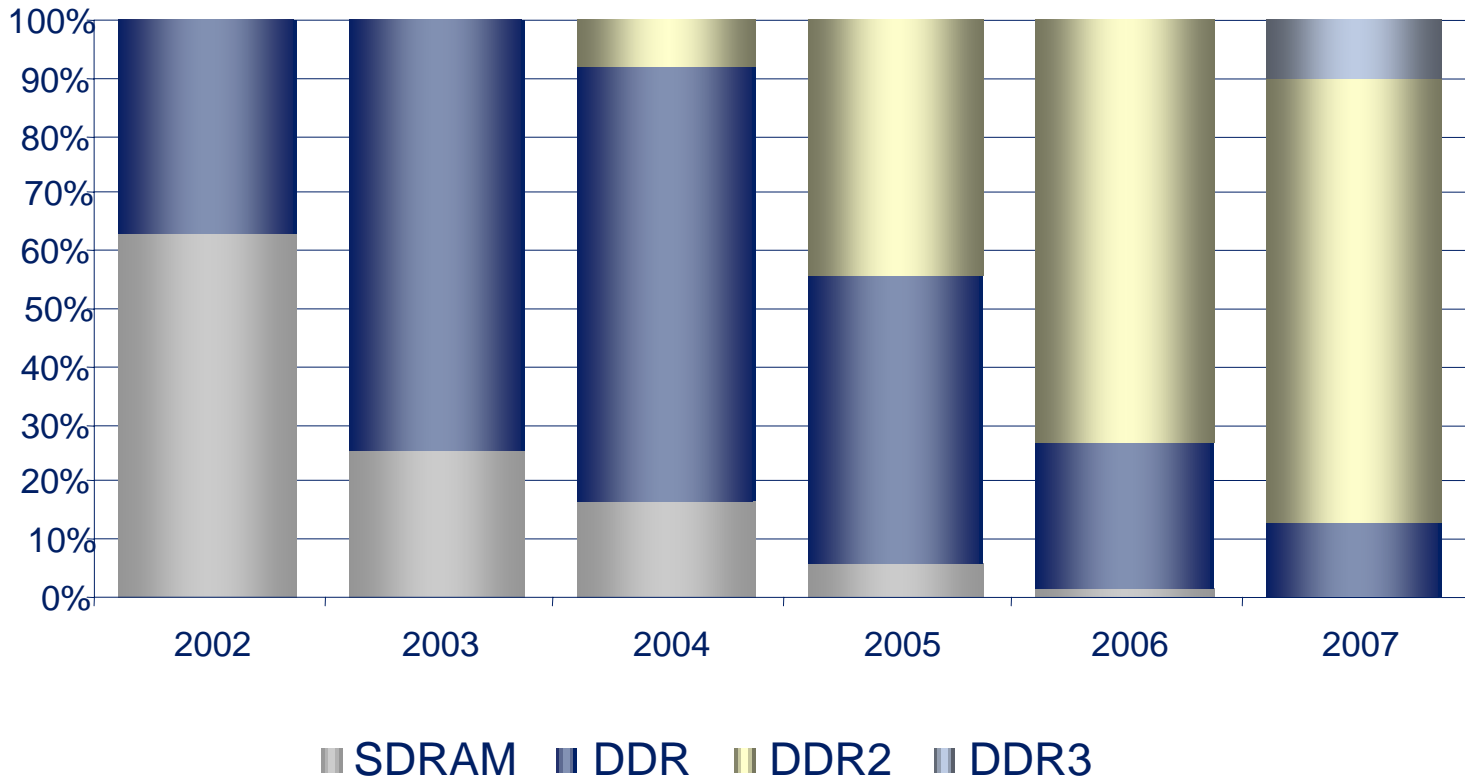
- PC-like approach
- requires more RAM space
- NAND Flash cost advantage is paid by higher power budget



Infineon Specialty DRAM : Summary

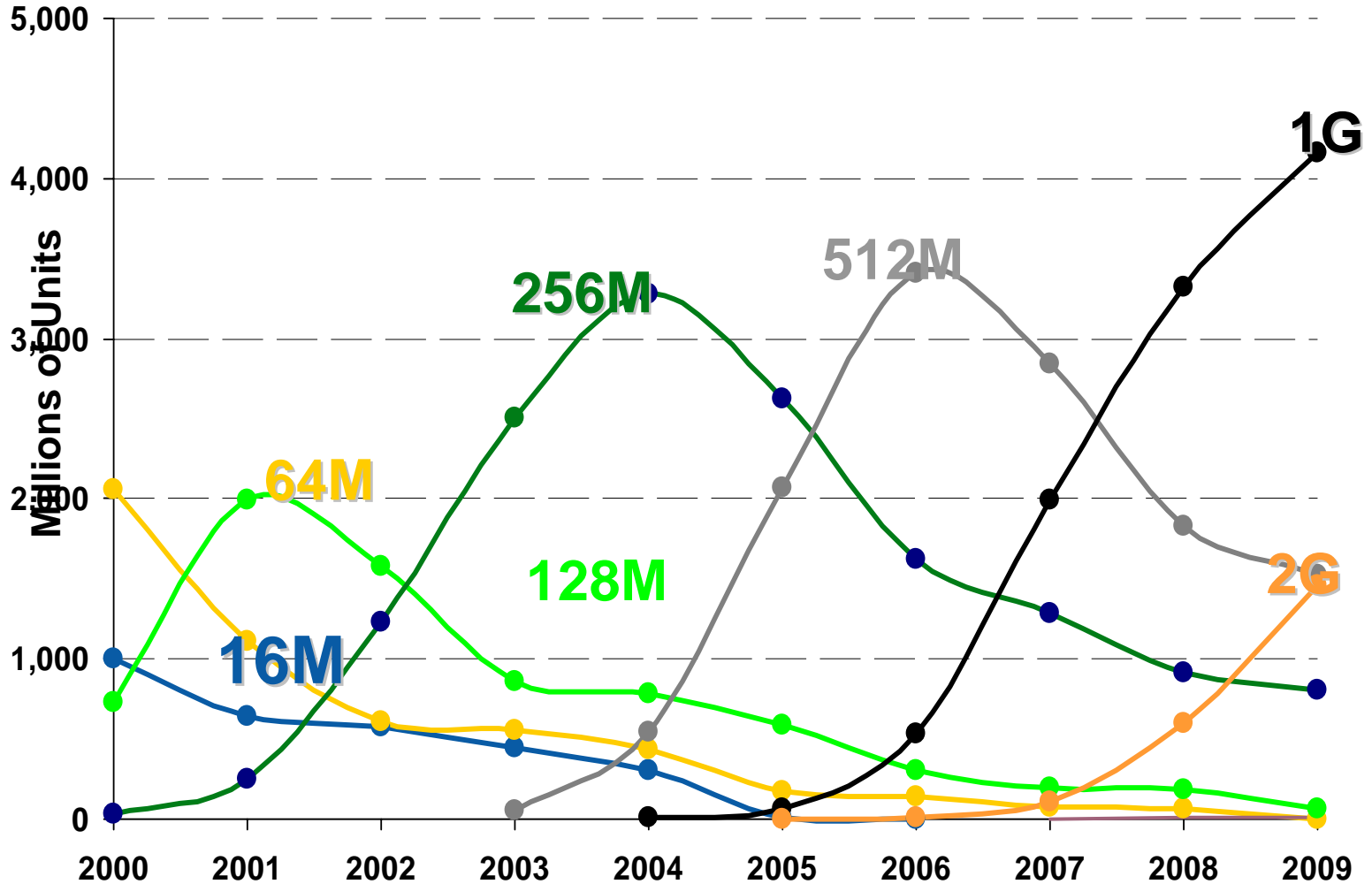


World Wide DRAM Market Trends

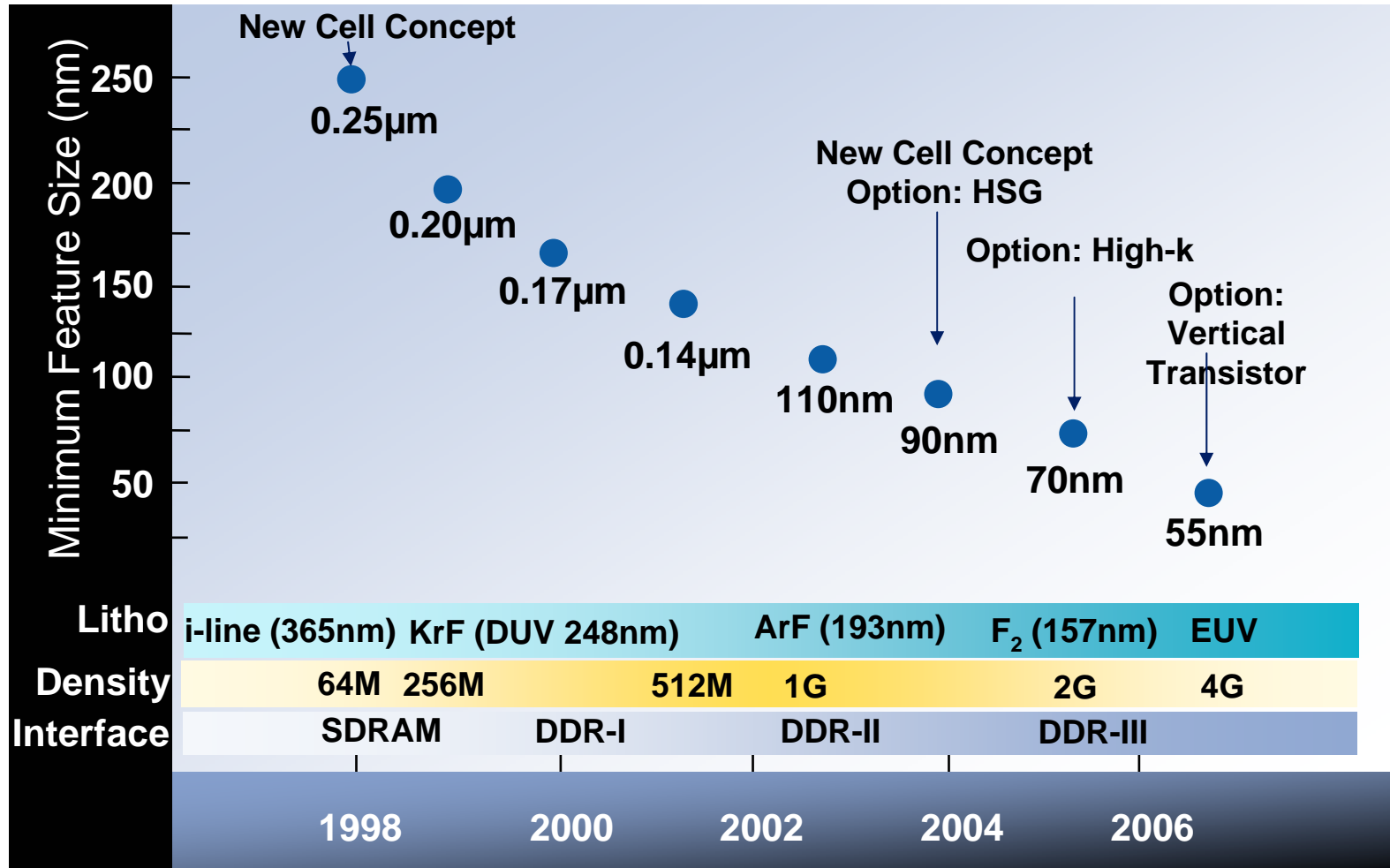


DDR2 initial production ramp in 2004

Overview: World Market by Generation



Trench, the DRAM Technology of the Future



Thank You