

Performance Evaluation in Wireless Networks and Technologies from 2.5 G, 3G, LTE to 4G and Beyond

ICIW 2008, AICT 2008

Athens, June , 2008

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Munich / Vienna

Overview

The ICT Evolution

High Performance Computing

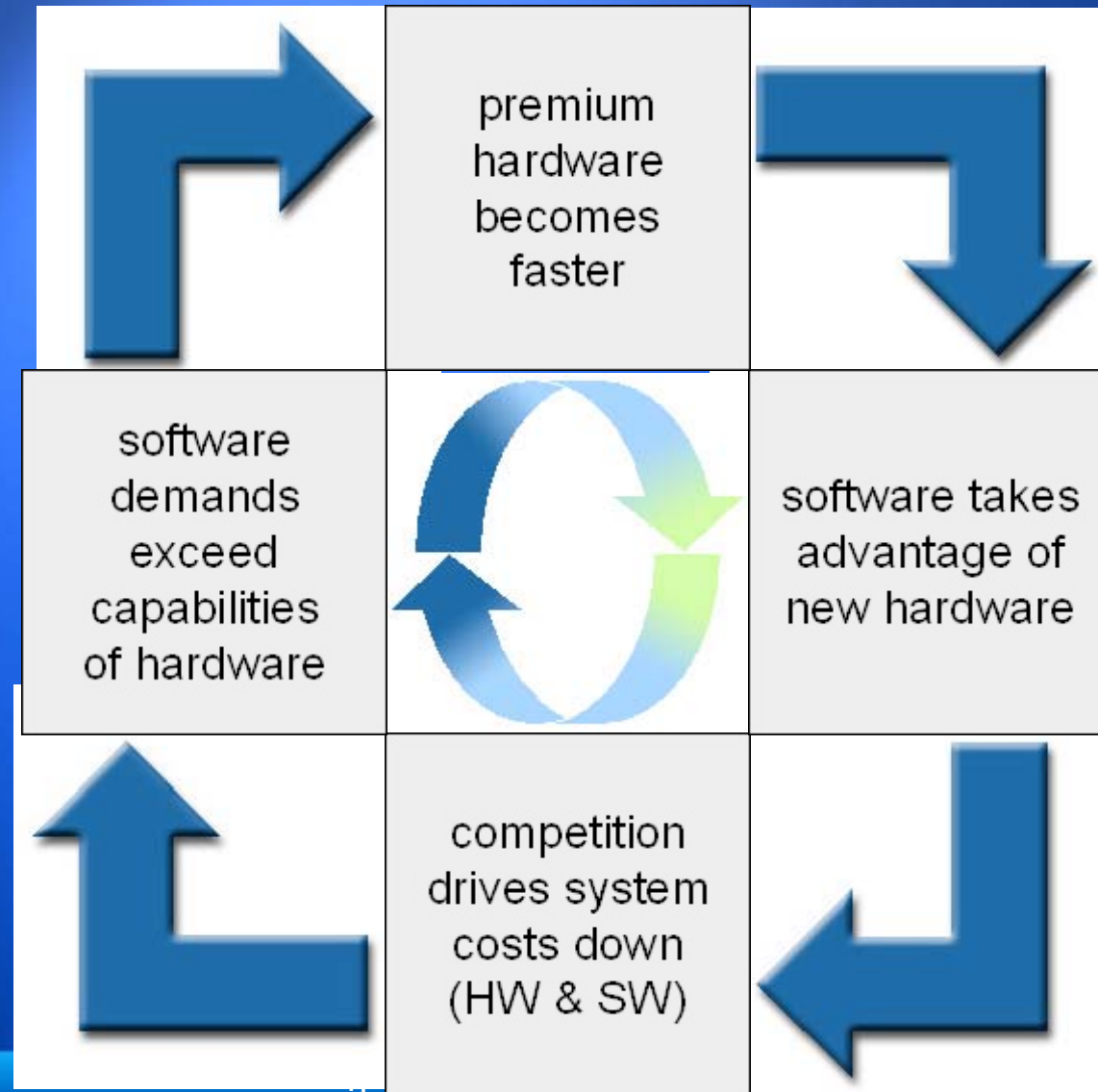
Fixed Mobile Convergence

Emerging Tech. & Trends: FI

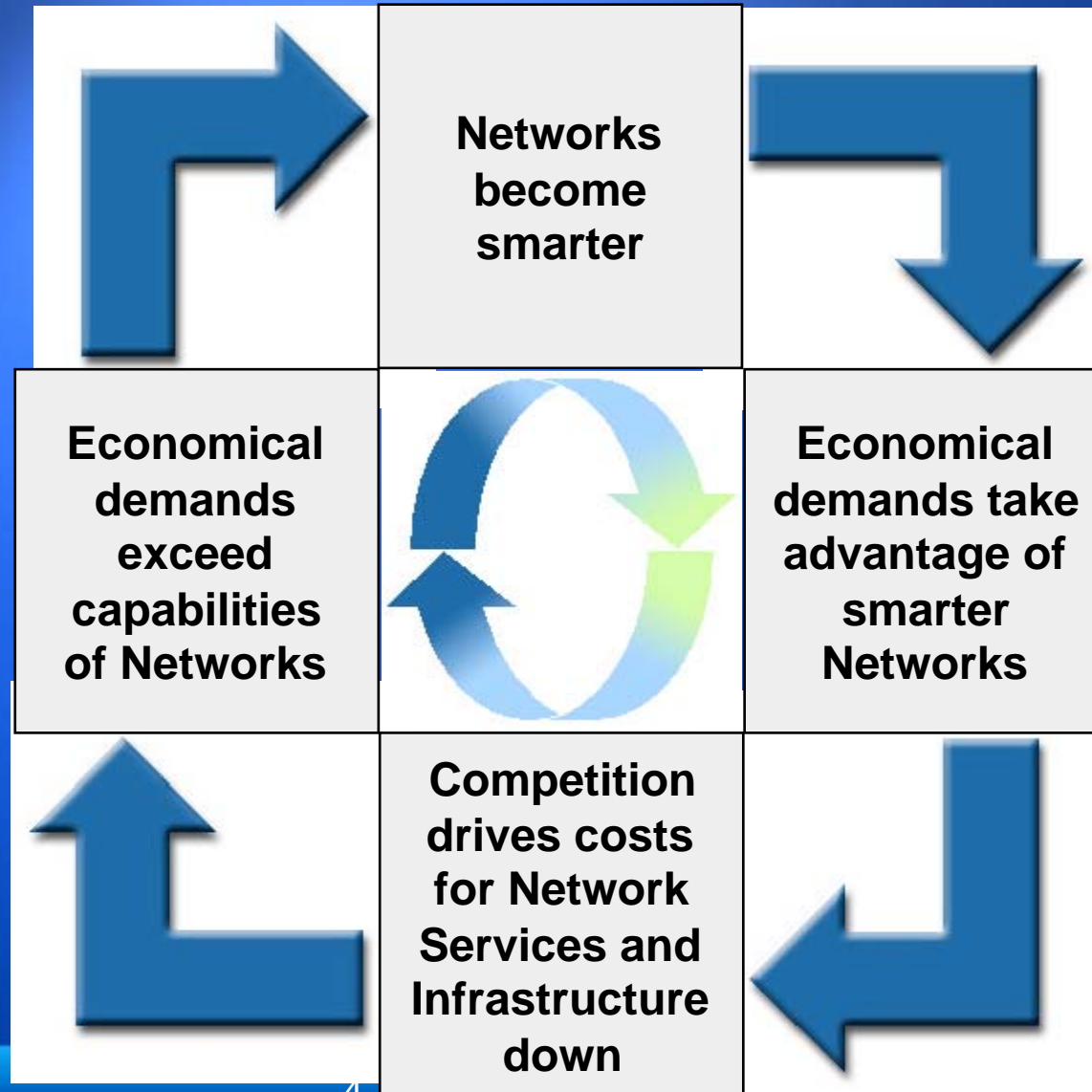
Security State & Trends

Conclusion

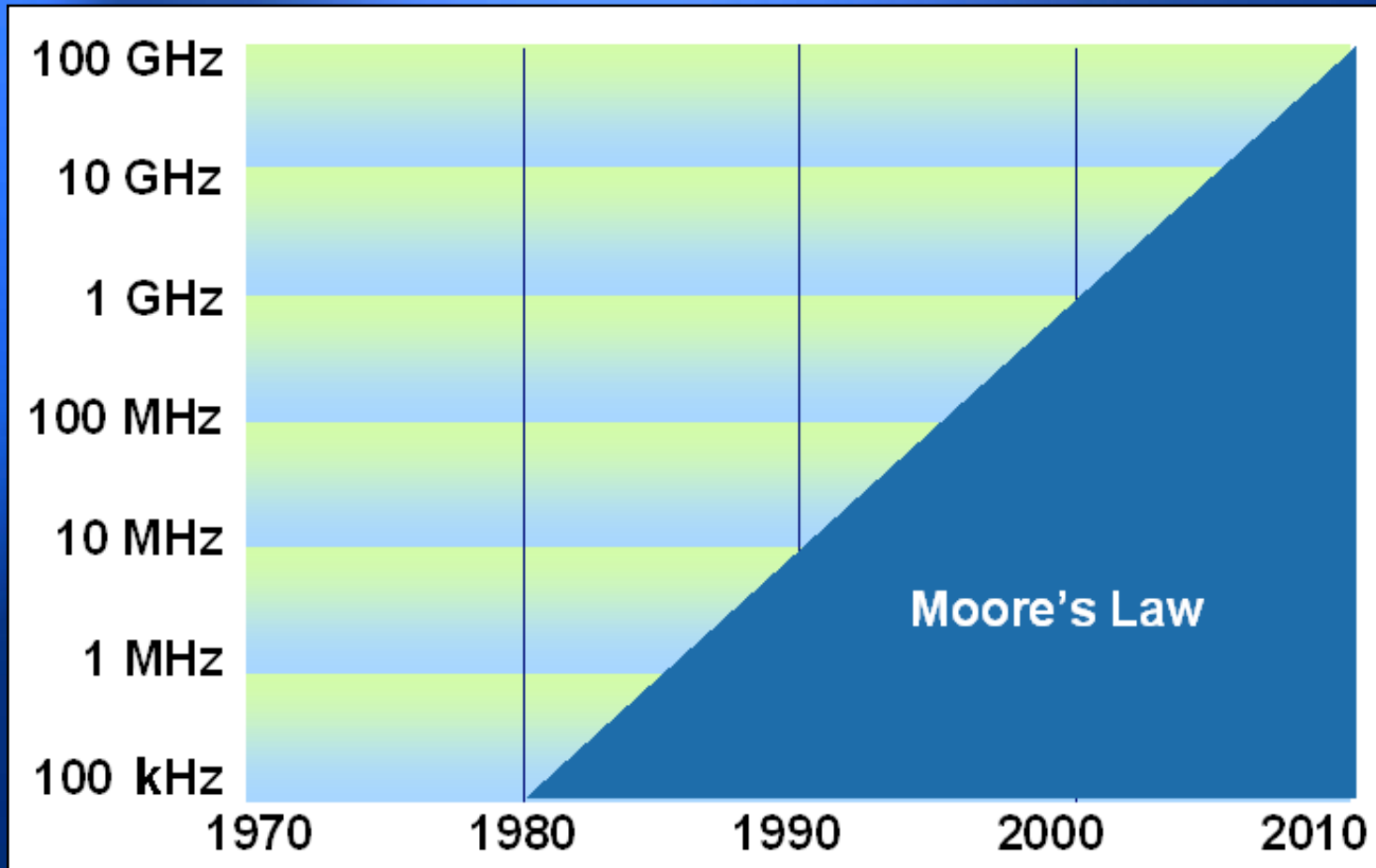
Hardware / Software Life-Cycle



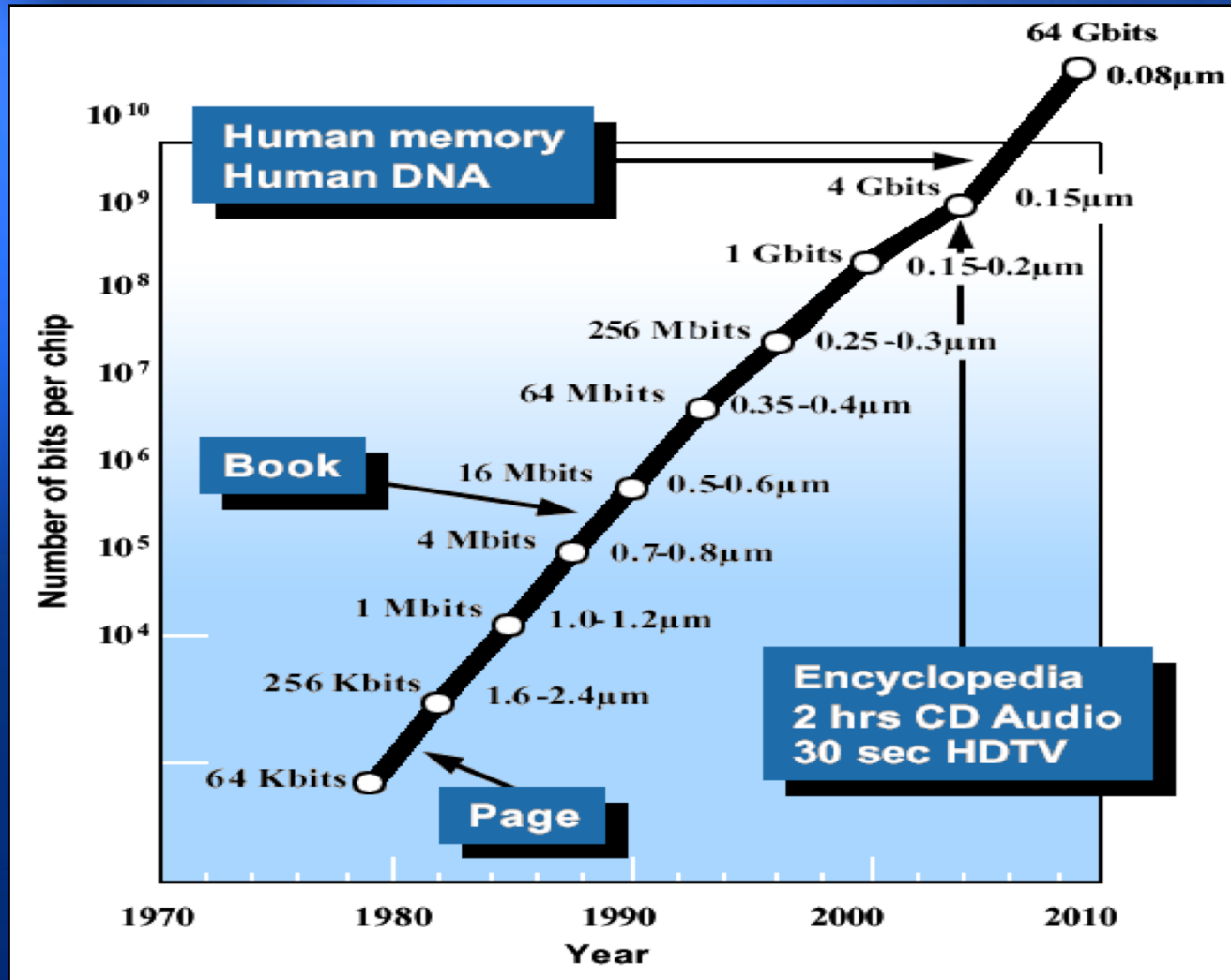
Network Development Life-Cycle



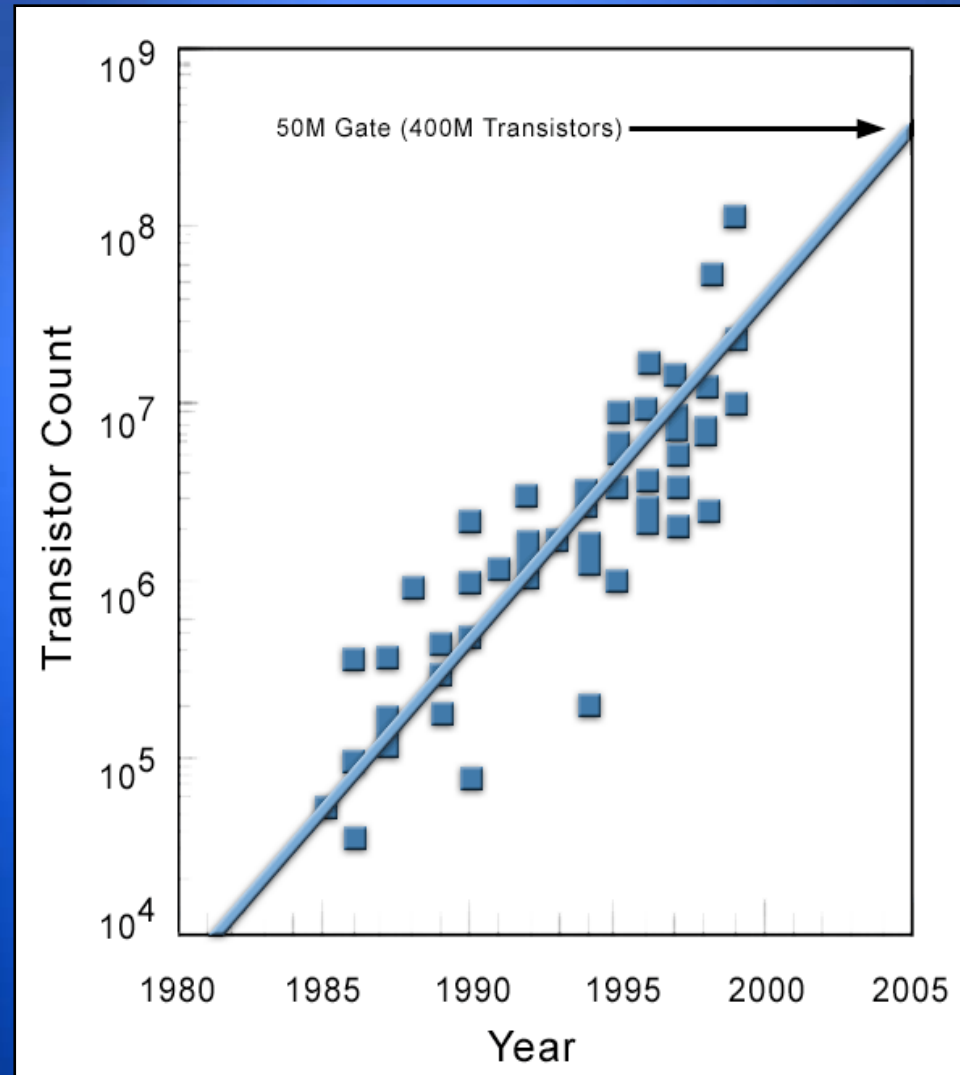
Moore's Law



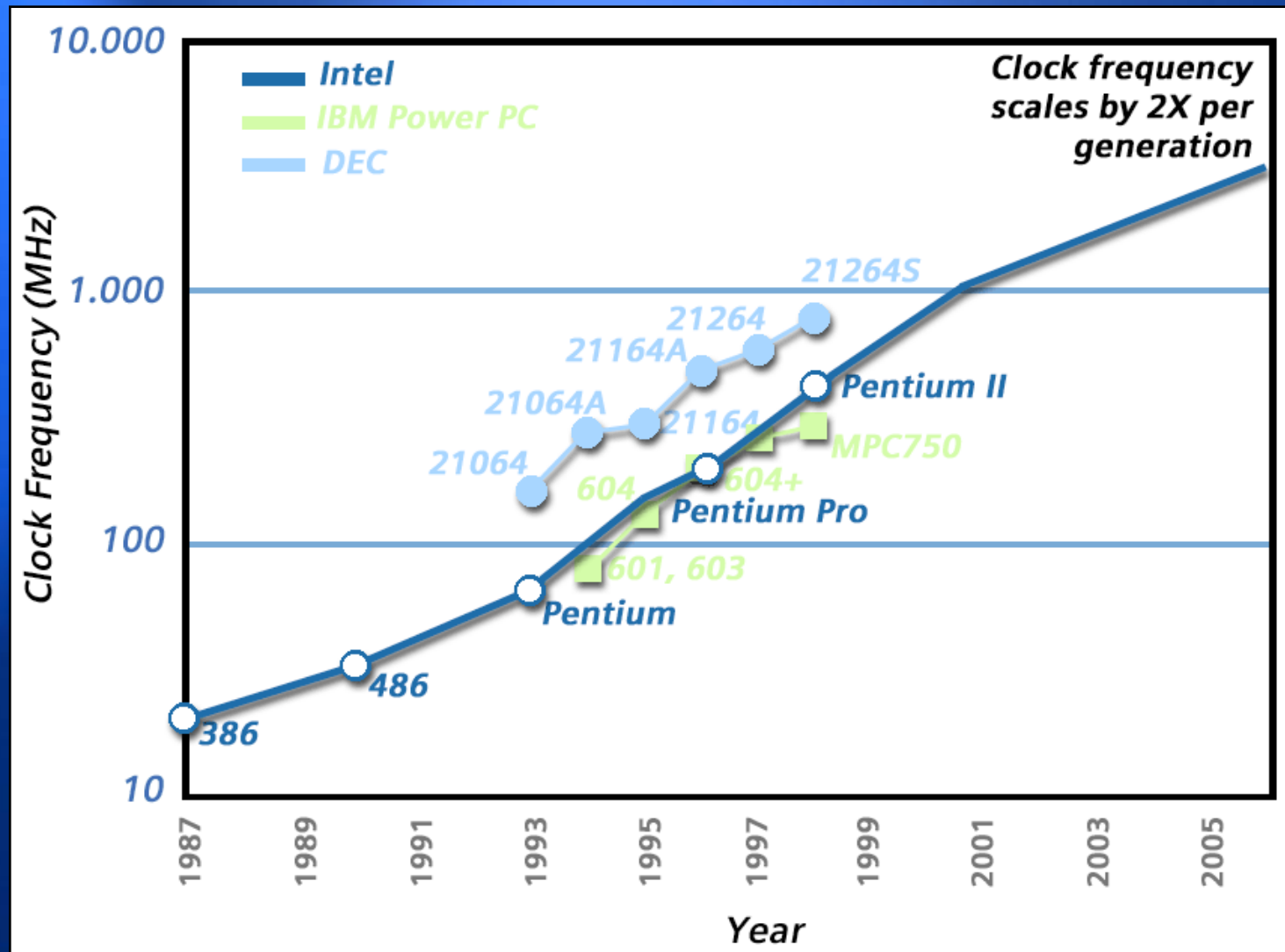
Memory Capacity per Chip



Number of Transistors per IC (surpassed !!!)



Clock Frequency (surpassed!!!)



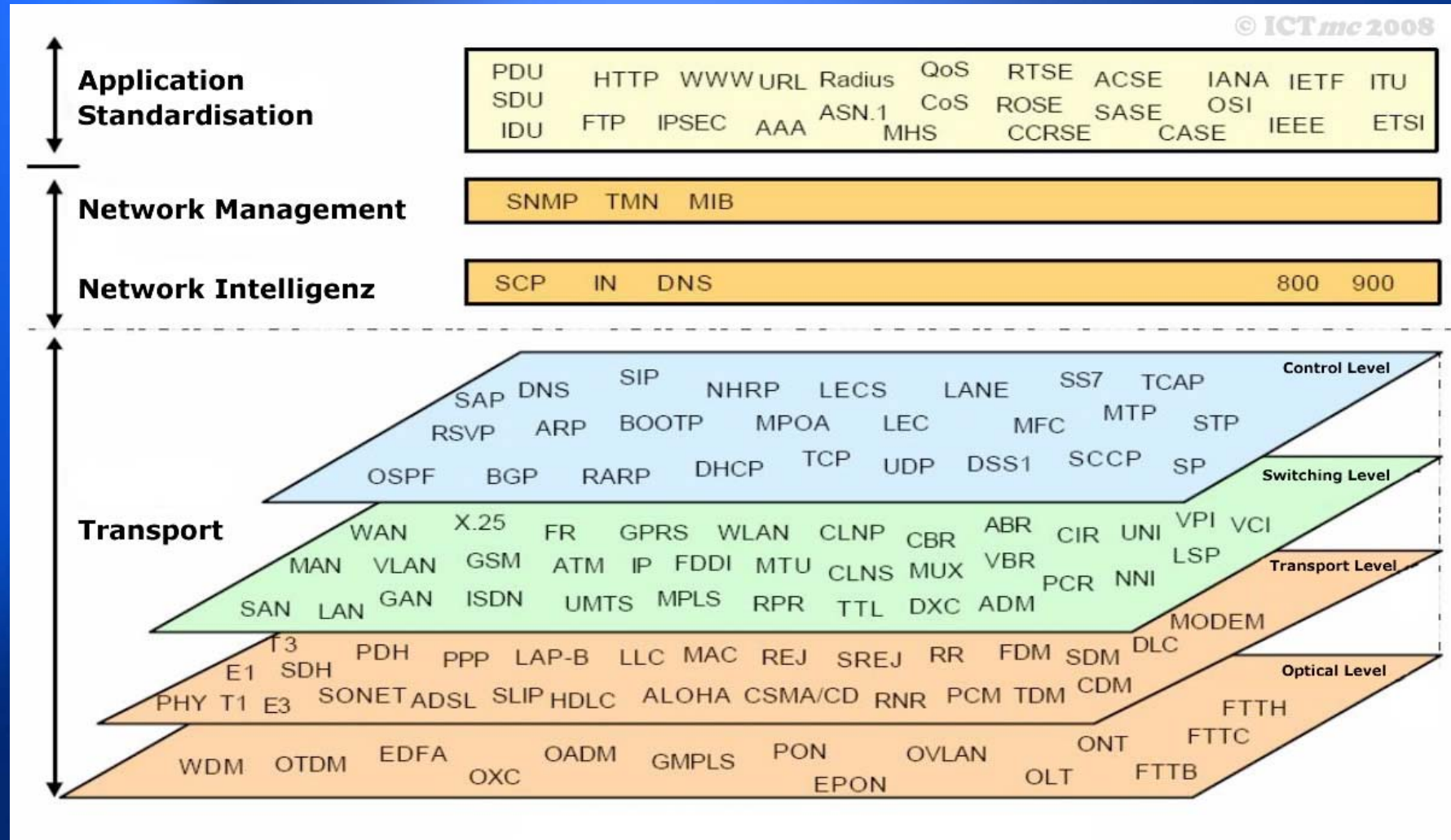
LAN, MAN & Co

Distanz	Circumferences	Example
1 cm	Chip	Chip Computer Network
10 cm	Circuit board	Circuit Board Network
1 m	System	Microprocessor Network
5 m	Local Environment	Pico Netowrk /PAN (Personal Area Newwork)
10 m	Room	SAN (Storage Area Natwork)
100 m	Building	LAN, WLAN
1 km	Campus	LAN, WLAN
10 km	City	MAN - Metropolitan Area Network
100 km	Country	WAN - Wide Area Network
1000 km	Continent	GAN - Global Network
10.000 km	World	GAN - Global Area Network

Performance Highlights

Parameter	2002	2010 Estimate
Core Clock Rate	2.0 GHz	12.0 GHz
L2 Cache Bandwidth	64 Gbps	768 Gbps
Memory Bandwidth	4.0 Gbps	64 Gbps
Endpoint Network Bandwidth	125 MBps	12.5 GBps
Single λ Capacity	10 Gbps	100 Gbps
λ 's per fiber pair	16	1024
Fiber Capacity	160 Gbps	100 Tbps

Abbreviations Jungle !!!



Technology Penetration, ICT and the Global Economy

