Networks Update

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Nokia Capital Market Days 2003

Outline

- 2003 in a nutshell
- The mobile infrastructure market
- Elements of Nokia Networks strategy
- Addressing the growth opportunities

2003 in a nutshell

Nokia Networks in 2003

Sharp focus as a result of successful restructuring

Large supplier to 8 out of 10 of the largest operator groups in the world

Strong progress in WCDMA and EDGE deployments

Mobile entry solution launched to address the next billion subscribers

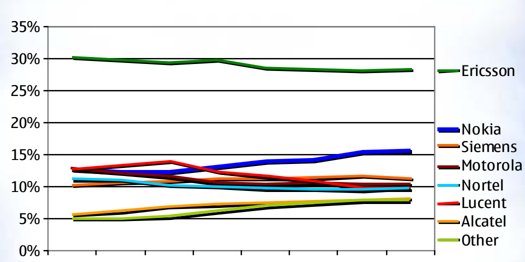
Good market momentum

- example: well over 100 packet core network deals

Strong actions on quality

Stronger in difficult times

Overall market share, all mobile standards, 12 month rolling average



Source: Company reports and Nokia

The mobile infrastructure market 2004 - 2007

Mega trends

Towards 2 billion subscriptions

Mobile voice from 20% to 50% of traffic

Mobile data from 10% to 30% of operator revenues

Market characteristics

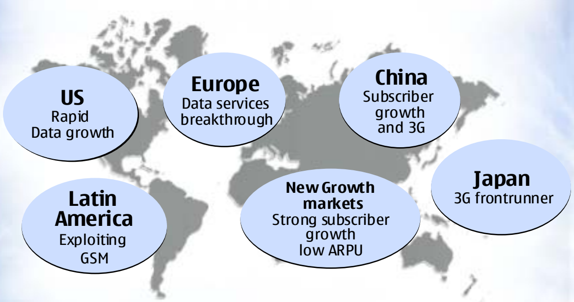
Current understanding: 2004 market at 2003 level in Euro

Segments of good growth – example: Packet Core Networks

Market scenarios after 2004 driven by the success of data services

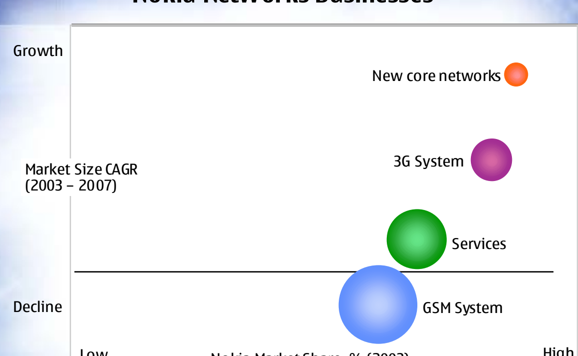
Operator investments with short notice
- triggered by user demands & operator financials

Geographical trends

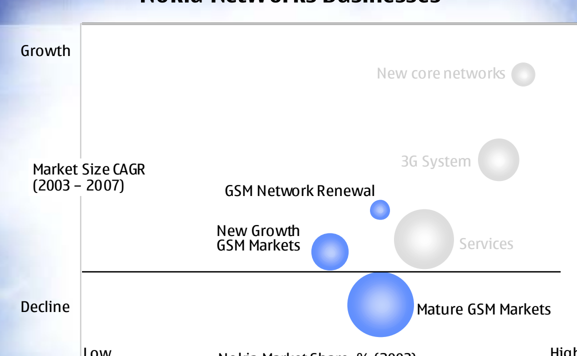


Elements of Networks strategy

Nokia Networks Businesses



Nokia Networks Businesses



WCDMA & EDGE Radio

Today
- WCDMA market leader with 30.000 BTS deployed
- 37 WCDMA contracts announced
- 4 WCDMA Nokia networks launched

- Global no 1 in EDGE
- 2 EDGE networks launched in US

Winning the growth phase
- Lead efficiency race
  - Total cost of deployment
  - R&D flexibility
  - Volume benefits
- Exploit modular architecture
  - Horizontal business model

3G System

New Core Networks
GPRS & 3G Packet Core & data service enablers

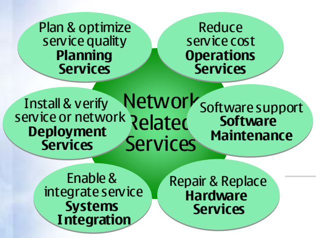
Today
- Market's most stable & best performing GPRS & 3G Packet Core
  - Vast majority of recent business to Nokia
- Pivotal role in MMS
- First 9 deals on Intelligent Content Delivery
- Nokia first in Push-to-Talk over Cellular

Winning the growth phase
- CS Core Release 4
  - 30 – 70% OPEX reductions from today's core networks
- Intelligent Content Delivery
  - The intelligent packet core for multimedia services traffic & charging
- IP Multimedia Subsystems
  - Interactive IP based applications for mobile phone users, the basis for future connectivity services

New core networks

Network related services

- More than 25% of Networks revenues from services in 2003
- Tight link to other businesses & focus on high value added



Services

Growing faster than market

WCDMA and EDGE market leader – leading the efficiency race

Building on market's best GPRS & 3G Packet Core implementation

Network services - more than 25% of Networks revenues from services in 2003 and growing

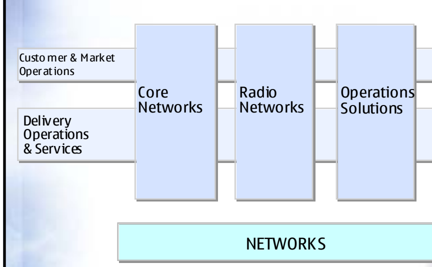
Drive for higher margins

Efficiency
- Leverage highest volume
- Fewer product variants
- Relentless quality drive

Software
- Increasing share of software revenues

Services
- Investing into high value services
- Shifting commodity services out

Focused operational mode



Conclusions

- Markets are stabilizing - 2004 at the same level as 2003
- Selected market segments will offer growth opportunities
- Networks restructured with crisp focus and cost realigned
- Networks is well positioned to address the growth segments
- We will continue to gain market share

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