Multimedia – Seed for Growth

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Multimedia

Nokia Capital Market Days 2003

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Mobility in Convergence

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CONNECTING PEOPLE

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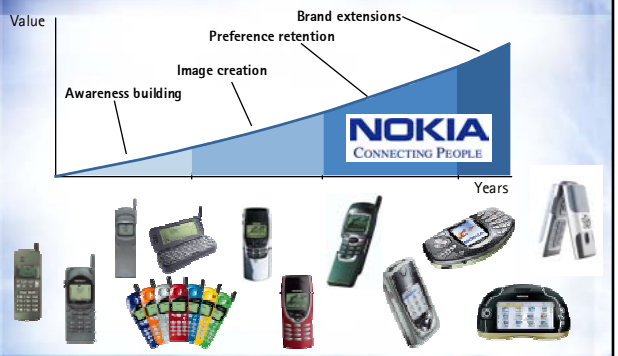
Brand development is a long term effort



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Top 10 Global Brands 2003 by Value

(Source: Interbrand Corp, BusinessWeek 2003)

		Value 2003 MUSD	Value 2002 MUSD	Country
1.	Coca-Cola	70,453	69,637	U.S.
2.	Microsoft	65,174	64,091	U.S.
3.	IBM	51,767	51,188	U.S.
4.	General Electric Company	42,340	41,311	U.S.
5.	intel	31,112	30,861	U.S.
6.	**NOKIA**	**29,440**	**29,970**	**Finland**
7.	Disney	28,036	29,256	U.S.
8.		24,699	26,375	U.S.
9.	Marlboro	22,183	24,151	U.S.
10.	Mercedes-Benz	21,371	21,010	Germany

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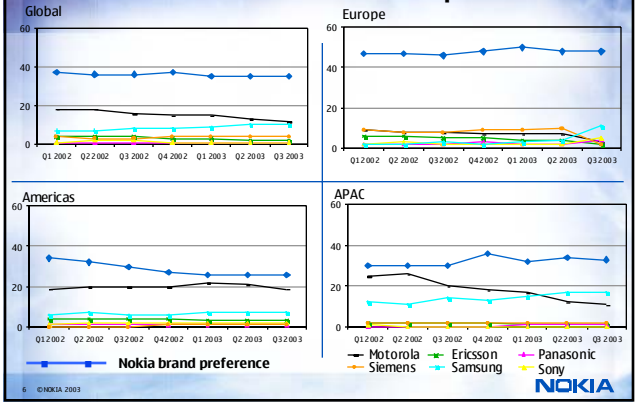
Nokia is the clear leader in brand preference



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Mobile Multimedia Opportunity

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Nokia focus areas in consumer multimedia

Imaging

Audiovisual communication with imaging optimised devices

Games

Console quality games
Multiplayer games
Online services

Media and Music

Discover & Consume
Create & share
Music, video, radio, www, e-mail

Enhancements

Intellegent devices around the mobility
Car, home, office

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Active and passive fun states

- Mobility brings fun to life:

In case you're bored and need excitement

or...

In case you're stressed and need calmness and relaxation

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Where's convergence impacting?

Mobility has already taken over

- Portable FM radios
- Pagers
- Watches
- Alarm clocks

Mobility starts to impact the market

- Portable CD & casette players
- MP3 players
- Digital cameras
- PDAs

Mobility will have a long term impact

- Laptops
- Web browser devices
- Video camcorders
- Traditional analog media

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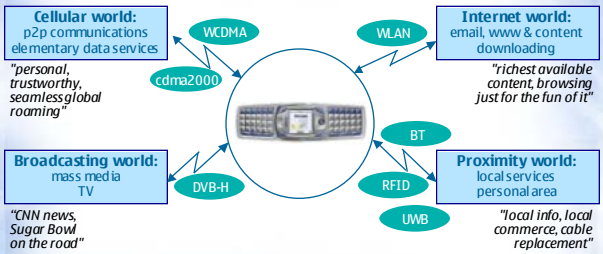
Multiradio unites several worlds to a mobile terminal

- Multiradio: cellular + any complementing radios
- "One radio fits all" will not happen because of maximum e2e performance needs, maximum data rate needs, and pricing, flexibility for the user



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Consumer acceptance requirements of services

- Convenient
- Ubiquitous
- Reachable
- Secure
- Customized
- Localized
- Spontaneous

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Imaging

Imaging

Audiovisual communication with imaging optimised devices

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It's not just about camera phones

Volumes of camera phones exceeded volumes of digital cameras in Q2 2003...

...and Nokia is today the world's biggest camera manufacturer

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Current camera industry

- Still and video camera industry volumes are approximately **100 million devices annually**

Trends:

- Rapid migration from analog to digital photography
- Megapixel race over, focus on true picture quality
- Online and home printing adding to traditional printing services
- Convergence of mobile and photographic industries

Kodak Picture Center

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Connected mobile imaging industry

Nokia strategy

- Industry leading range of imaging optimised terminals
- Improving features as costs decline and network capabilities improve
  - VGA in 2003 - megapixel cameras in 2004
  - Increasing memory size
  - Improving editing capabilities (on the device and on PC & web)
  - Improving video capabilities
- Business system development
  - MMS with operators
  - Cooperation with e.g. Kodak and HP

Nokia business model

- Higher priced devices
- Multiple device ownership
- Application revenue

hp invent

Kodak Picture Center

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Media

Media and Music

Discover & Consume
Create & share
Music, video, radio, www, e-mail

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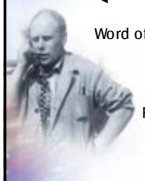
Widening the definition of media



Narrowcast

Me ⟷ Micro

Word of Mouth
Mail
Phone
Fireside

New 'Media'

Internet
Mobile
E-mail
SMS
CD/MP3
Digital Camera
Forum/BBS
Personal Websites

Broadcast

Mezo ⟷ Macro

Newspapers
Radio,TV
Cinema
Magazines
Books

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What is mobile media?

Key media types

- Video content (sports, music, news, cartoons)
- Music (MP3, AAC)
- Magazines and newspapers in www format
- Context sensitivity

Key technologies

- High speed connectivity with EDGE, WCDMA, WLAN, DVB-H, UWB
- Easy to use UI – series 90
- Video player
- Music player
- HTML & xHTML browsers
- Messaging (SMS, MMS, e-mail, chat)

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Mobile media doesn't yet exist today

- Several competing product categories
  - Media device from Nokia
  - Some PDAs
  - DVD players
  - Analog TV phones
  - Portable music devices
- Several competing memory media
  - DVD
  - Hard drive
  - Memory cards
  - Streaming
  - Solid state
- Business system still to be developed
- Airtime cost needs to come down for mass market streaming video services
  - EDGE
  - WCDMA
  - CDMA2000 EV-DV
  - DVB-H
  - WLAN
  - UWB

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Nokia in media business

N-Media business unit

- Mobile content
- Media devices

Media business unit starting points

- Devices: Nokia 3300 & Nokia 7700
- Symbian based Series 90 – optimised for media consumption with all key applications
- Extensive content agreements with leading global players
- Extensive billing agreements with leading mobile operators
- MMC card as a distribution channel

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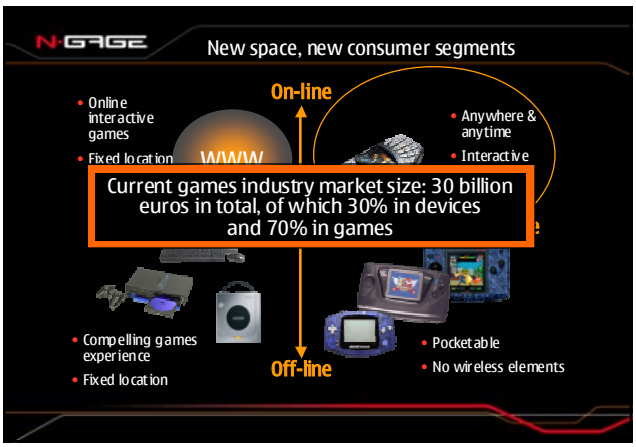
N-GAGE — New space, new consumer segments



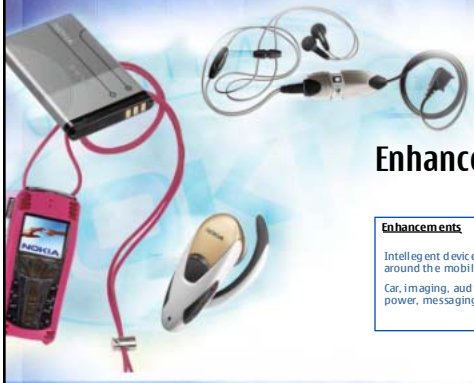
N-GAGE — N-Gage games offering

- **All key games publishers support N-Gage platform**
- **Steady flow of new games titles with 100 titles by the end of 2004**
- **N-Gage Arena is the key differentiator and most games will increasingly take advantage of Arena features in 2004**
- **Community functionality has been proven to be extremely important**
- **Typical customer: 20-30 years old male**

N-GAGE ARENA

Tom Clancy's SPLINTER CELL

TONY HAWK'S PRO SKATER

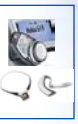


Enhancements

Enhancements

Intelligent devices around the mobility

Car, imaging, audio, power, messaging, etc



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Enhance Mobile Experience

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Cooperation with Operators

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Nokia and Operator Partners

Nokia brings the most value added to its operator partners

- World class brand - creates consumer pull
- Ease of use – enables higher ARPU
- High quality – less need for customer service
- Enabling operator differentiation
- Wide product range
- Have the best support resources (marketing, sales, logistics and CSM)
- Best partner for end to end data services market

Current Nokia phones in Vodafone Live!

Nokia 3650 Nokia 6600 Nokia 3200

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Nokia -offering of ARPU enhancing features

"Orange says Nokia's Mobiles Easier to Use than Motorola's
It said Orange customers using Motorola handsets sent on average 14 text messages a month compared with 45 a month sent by owners of Nokia phones"

Softkey key shortcut to home portal

0-key shortcut to access home portal

Intuitive graphical UIs

Source: Global Mobile Daily

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Typical example of product variation

160 Custom Transceivers

260 Sales Package Variants*

Assembly To Order Engine
2 variants
- 1 for APAC
- 1 for Europe

*May 2003

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Summary

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Market opportunity in consumer multimedia

Imaging

Camera and mobile imaging market ~EUR 25 billion

Games

Current games industry (device & software) ~ EUR 30 billion

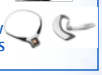
Media and Music

Current device market size ~EUR 1 billion

Enhancements

Current market size impossible to quantify

Area expected to grow in-line with other units



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