# Technology Advantage & IPR

Tero Ojanperä Executive Vice President, Chief Technology Officer, Nokia



#### **Disclaimer**

It should be noted that certain statements herein which are not historical facts, including, without limitation, those regarding: A) the timing of product and solution deliveries; B) our ability to develop, implement and commercialize new products, solutions and technologies; C) expectations regarding market growth, developments and structural changes; D) expectations regarding our mobile device volume growth, market share, prices and margins; E) expectations and targets for our results of operations; F) the outcome of pending and threatened litigation; G) expected timing, scope and effects, including estimated synergy savings, of the merger of Nokia's and Siemens' communications service provider businesses; and H) statements preceded by "believe," "expect," "anticipate," "foresee," "target," "estimate," "designed," "plans," "will" or similar expressions are forward-looking statements. Because these statements involve risks and uncertainties, actual results may differ materially from the results that we currently expect. Factors that could cause these differences include, but are not limited to: 1) the extent of the growth of the mobile communications industry, as well as the growth and profitability of the new market segments within that industry which we target; 2) the availability of new products and services by network operators and other market participants; 3) our ability to identify key market trends and to respond timely and successfully to the needs of our customers; 4) the impact of changes in technology and our ability to develop or otherwise acquire complex technologies as required by the market, with full rights needed to use: 5) competitiveness of our product portfolio: 6) timely and successful commercialization of new advanced products and solutions; 7) price erosion and cost management; 8) the intensity of competition in the mobile communications industry and our ability to maintain or improve our market position and respond to changes in the competitive landscape; 9) our ability to manage efficiently our manufacturing and logistics, as well as to ensure the quality, safety, security and timely delivery of our products and solutions; 10) inventory management risks resulting from shifts in market demand; 11) our ability to source quality components without interruption and at acceptable prices; 12) our success in collaboration arrangements relating to development of technologies or new products and solutions; 13) the success, financial condition and performance of our collaboration partners, suppliers and customers; 14) any disruption to information technology systems and networks that our operations rely on; 15) our ability to protect the complex technologies that we or others develop or that we license from claims that we have infringed third parties' intellectual property rights, as well as our unrestricted use on commercially acceptable terms of certain technologies in our products and solution offerings; 16) general economic conditions globally and, in particular, economic or political turmoil in emerging market countries where we do business; 17) developments under large, multi-year contracts or in relation to major customers; 18) exchange rate fluctuations, including, in particular, fluctuations between the euro, which is our reporting currency, and the US dollar, the Chinese yuan, the UK pound sterling and the Japanese yen; 19) the management of our customer financing exposure; 20) our ability to recruit, retain and develop appropriately skilled employees; 21) the impact of changes in government policies, laws or regulations; and 22) satisfaction of the conditions to the merger of Nokia's and Siemens' communications service provider businesses, and closing of transaction, and Nokia's and Siemens' ability to successfully integrate the operations and employees of their respective businesses; as well as 23) the risk factors specified on pages 12 - 22 of the company's annual report on Form 20-F for the year ended December 31, 2005 under "Item 3.D Risk Factors." Other unknown or unpredictable factors or underlying assumptions subsequently proving to be incorrect could cause actual results to differ materially from those in the forward-looking statements. Nokia does not undertake any obligation to update publicly or revise forward-looking statements, whether as a result of new information, future events or otherwise, except to the extent legally required.



# **Technology gives Nokia** many advantages



Cost/ volume/ segmentation

Shaping the future technology and competitive landscapes differentiation



Performance segments



## **Nokia Technology Strategy**

#### **Embrace the Internet**

Excel with software platforms and applications

Win developers with consistent architectures

Lead multi-radio productization and evolution



Nokia has an early mover advantage

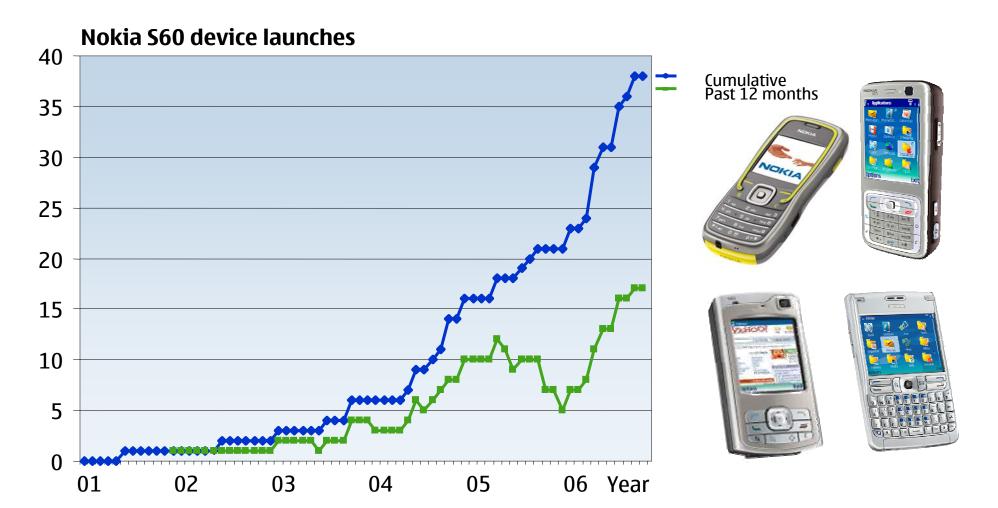
in mobilizing the Internet





Software

### Market leading S60 expands to mid-range





# We maximize innovation with developers

- 2.7 million Forum Nokia developers
  - 400 Forum Nokia PRO Companies
  - 750,000 mobile Java developers
- 50+ devices compatible with Content Discoverer
- 15m+ Nokia Content Discoverer clients in the market





2.5 times higher data ARPU compared to competition



### **Nokia creates smart connectivity**

5MP Camera & optics Online sharing



**Autofocus** 



**Unparalleled** connectivity WiFi, 3G, HSDPA, Bluetooth, EDGE, GPS, FM Radio

Software



**Internet browsing** with Minimap **Toolbar** 

Web feeds

amazon.com







2.6 inch TFT screen 16 million colours

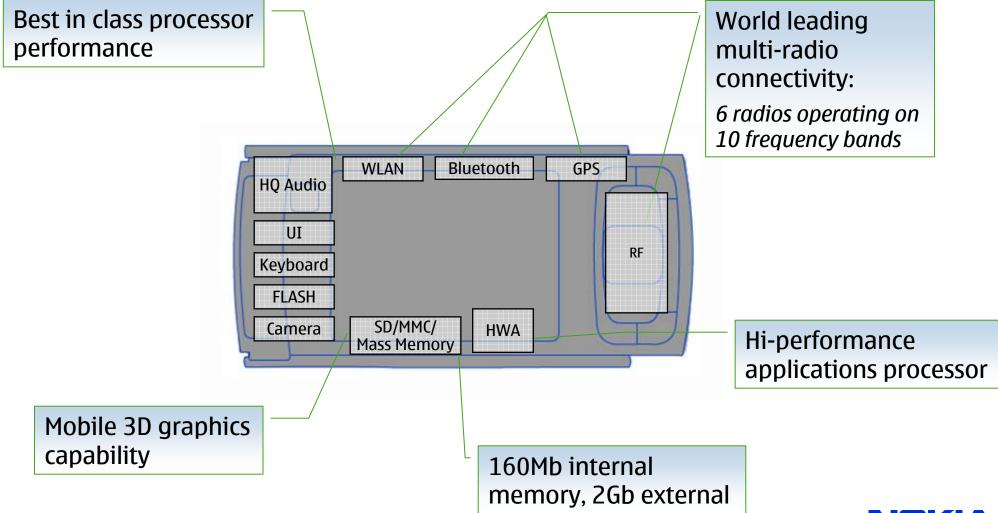
Support for corporate e-mail and office applications



Maps, GPS & additional features







# Using IPR as a means to safeguard our technology advantage



#### IPR creates value for Nokia in many ways

#### Freedom of action

- Technology access
- Cross licensing
- Litigation avoidance

#### **Cost** advantage

- Competitive royalty rates
- Prevent freeriders

# Influence in business environment

- Preferred technologies
- Collaboration
- Partnering

#### Product differentiation

- Unique features
- Look & feel
- Trademarks

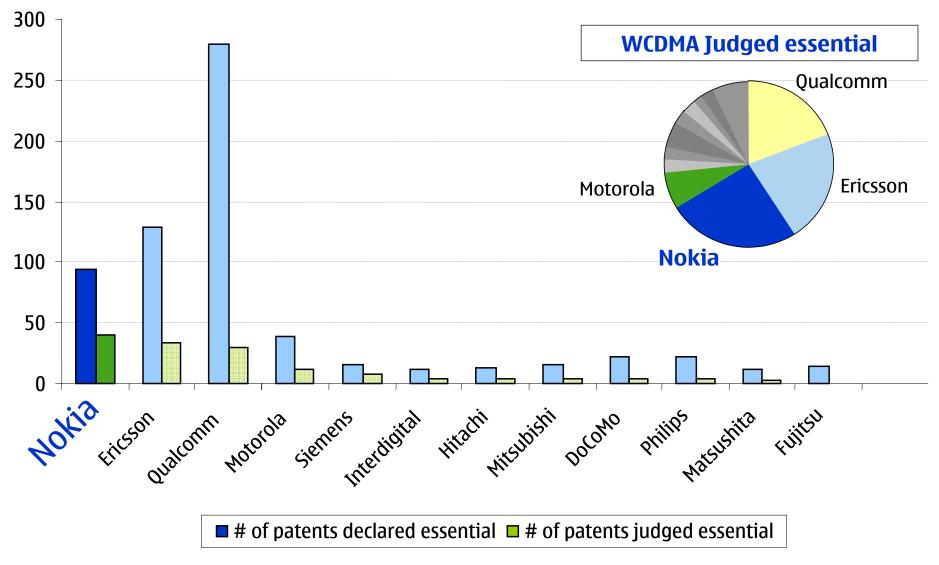
#### Licensing revenue

- Licensing
- Sale of IPR





#### Nokia – leader in WCDMA essential IPR

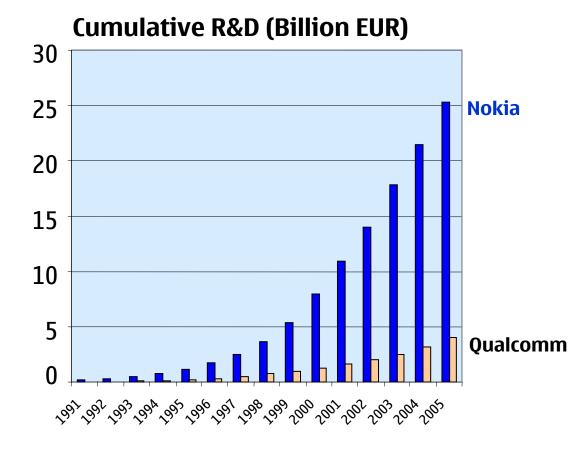




#### Qualcomm early patents will be paid up

# General technology areas from the late 80's - early 90's

- Rake receiver
- Soft handover
- Spread/scramble
- Orthogonal spreading code tree
- Softer handover
- Closed loop power control



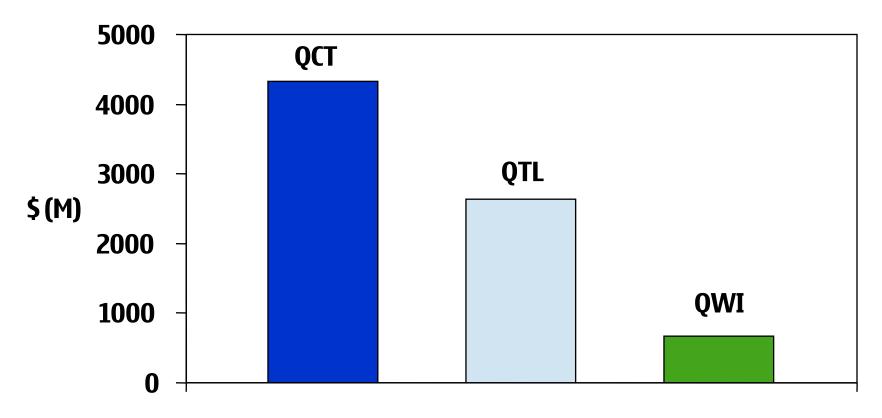
Source: Company reports

"... early patents remain licensed...",
Steve Altman, Qualcomm Inc., November 13, 2006



# Potential business exposure

#### Qualcomm FY2006 Revenues: \$7,526 million



Source: Qualcomm

QCT: Qualcomm CDMA Technologies QTL: Qualcomm Technology Licensing QWI: Qualcomm Wireless & Internet



# Nokia technologies and IPR generate a true long term competitive advantage



