



symbian

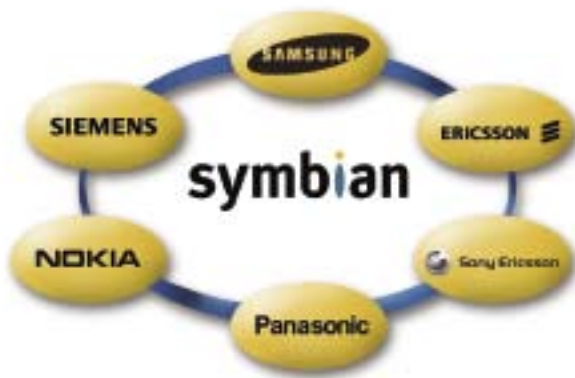
www.symbian.com

Powering the heart of the wireless community

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Symbian is a software licensing company. It is owned by wireless industry leaders and is the trusted supplier of the advanced, open, standard operating system – Symbian OS – for mobile phones.

Symbian was established as a private independent company in June 1998 and is owned by Ericsson, Nokia, Panasonic, Samsung, Siemens and Sony Ericsson. Headquartered in the UK, it has offices worldwide.



Symbian has close to two decades of experience developing software technology for mobile computing devices and mobile phones.

Symbian's role as a driving force for the wireless industry is internationally recognized. This is reflected by key partnerships with leading-edge technology companies worldwide.

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Company milestones

2004

- Sharp licenses Symbian OS
- The 3G Nokia 6630, the first Symbian OS v8.0 phone, is produced
- Symbian shareholders purchase Psion stake in Symbian and invest a further £50m in cash funding
- Lenovo, China's largest IT corporation, licenses Symbian OS
- Symbian OS v8.0 announced
- Arima and LG Electronics license Symbian OS

2003

- The Nokia 6600, the first phone to utilize Symbian OS v7.0s, produced
- Symbian OS v7.0s unveiled
- Samsung becomes a Symbian shareholder

2002

- NTT DoCoMo launches 3G FOMA F2051 from Fujitsu
- Sendo licenses Symbian OS
- Siemens becomes a Symbian shareholder
- Symbian OS v7.0 for 3G mobile phones unveiled
- Sony Ericsson joins Symbian as a shareholder and licensee

2001

- Fujitsu licenses Symbian OS
- The first 2.5G Symbian OS phone, the Nokia 7650, is announced
- The Nokia 9210 Communicator goes on sale to the public

2000

- Sony and Sanyo license Symbian OS
- The world's first Symbian OS phone, the Ericsson R380, goes on sale to the public

1999

- Panasonic joins Symbian as a shareholder and licensee

1998

- Symbian established as a private independent company

Symbian's mission

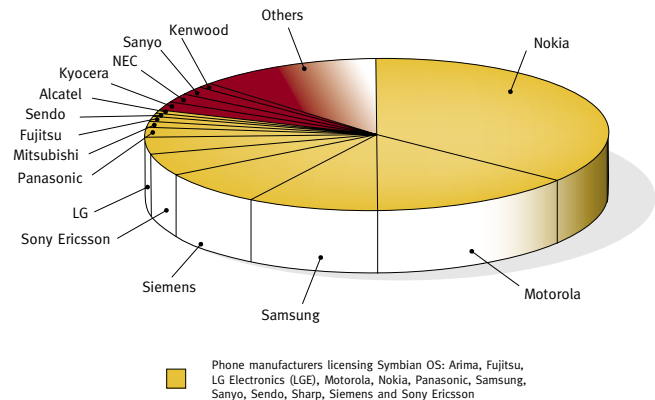
Symbian supplies an advanced, open, standard operating system for mobile phones.

Symbian's mission is:

To create a mass market for Symbian OS mobile phones by enabling our licensees to build winning products

Convergence of computing and telecommunications, growth in Internet traffic, and advances in semiconductor and display technology are revolutionizing the way we communicate. Symbian OS is at the heart of this revolution.

Symbian OS enables leading mobile phone manufacturers to build highly advanced mobile phones. Symbian OS integrates the power of computing with telephony, bringing advanced data services – using voice, messaging and on-board processing power – to the mass market.



Symbian OS licensees account for more than 85% of all phones shipped worldwide

Source: Gartner, December 2003 (Mobile Terminal Market Shares: Worldwide, 3Q03)



Symbian OS phones

Differentiation without fragmentation

Series 60 Platform

The following phones are available or planned using the Series 60 user interface:
 Nokia, 3230, 3650/3600, 3660/3620, 6260, 6600, 6630, 6670, 7610, 7650, N-Gage and N-Gage QD, Panasonic X700, Samsung SGH-D710, Sendo X and Siemens SX1



Panasonic X700

Series 90 Platform

The following phone is available using the Series 90 user interface:
 Nokia 7710



Nokia 7710

Series 80 Platform

The following phones are available or planned using the Series 80 user interface:
 Nokia 9210i, 9290, 9300 and 9500



Nokia 9500

UIQ

The following phones are available or planned using the UIQ user interface: BenQ P30, Sony Ericsson P800, P900 and P910, Motorola A920, A925 and A1000 and Arima U300



Sony Ericsson P910

Fujitsu

The following phones are available or planned using the Fujitsu user interface:
 FOMA F2051, F2102V, F900i, F900iT, F900iC, F901iC and F880iES for NTT DoCoMo's FOMA 3G network



FOMA F900i

A full list of Symbian OS phones can be found at:
www.symbian.com/phones

Symbian and the wireless market



Network operators are seeking to retain customers and raise revenues by rolling out more, and better, data services. Symbian OS enables advanced data services on current and next-generation wireless networks by providing a platform for compelling new services and applications on mobile phones.

Proprietary mobile phone operating systems, designed primarily for voice services, have limited data connectivity that allows only simple on-board games and other services.

Symbian OS, with integrated telephony and personal information management (PIM) functionality:

- **supports all major wireless standards to allow communicating across a wide range of networks and protocols**
- **is a multi-threaded, multi-tasking mobile operating system with real-time performance, enabling applications and advanced protocol stacks to run simultaneously**
- **allows wireless network operators to create compelling new services enabling them to foster customer loyalty.**

Aligning the wireless value chain

Setting the standard for wireless computing and telephony, Symbian brings together the wireless value chain. Symbian OS drives standards for the interoperation of data-enabled mobile phones with mobile networks, content, applications and services:

A platform for wireless services

Symbian delivers an advanced, open, standard operating system to its licensees. Symbian OS is flexible and scalable enough to be used in the variety of mobile phones needed to meet a wide range of user requirements. Symbian OS supports complex requirements of network protocols worldwide and enables a broad, international, developer community.

Providing wireless services

Open standards ensure global network interoperability, allowing mobile phone users to communicate with anyone, any way, at any time. The compelling advanced data services that operators can provide on Symbian OS phones will help minimize churn and maximize revenue.

Developing wireless services

Software developers are able, for the first time, to build applications and services for a global mass market of advanced, open, programmable, mobile phones. A set of standard application programming interfaces (APIs) across all Symbian OS phones and the advanced computing and communications capabilities of Symbian OS enables development of advanced services.

Symbian OS is a powerful aligning force for the wireless value chain. Mobile phone manufacturers, network operators and software developers are assured that they are working with an industry standard, open, operating system that allows customization and is focused on creating a mass market and driving the wireless community.



Symbian OS the mobile standard

Active Symbian OS licensees include: Arima, BenQ, Fujitsu, Lenovo, LG Electronics, Motorola, Nokia, Panasonic, Samsung, Sanyo, Sendo, Sharp, Siemens and Sony Ericsson. Mitsubishi holds a development license. New phones are appearing all the time.

Symbian OS is the advanced, open, standard operating system licensed by the world's leading mobile phone manufacturers. It is designed for the specific requirements of advanced 2.5G and 3G mobile phones. Symbian OS combines the power of an integrated application environment with mobile telephony, bringing advanced data services to the mass market. Symbian OS strengths:

Quality

Symbian OS is the result of close to two decades designing mobile operating systems

Fit for purpose

designed for advanced, open, standard mobile phones

Communications

tested by all licensees and on 2G, 2.5G and 3G standards

Battery life

advanced power management system

Messaging

support for SMS, EMS, MMS, email and fax

Standards and interoperability

conformance to industry standards: IPv4 and IPv6, Bluetooth, Java, WAP, SyncML

Integrated applications

contacts manager, phone applications, messaging

Well-architected

multi-tasking, fully object-oriented and component-based implementation

Robust

instant access to user data, ensures data integrity

Customizable

flexible user interface design on same core operating system

Symbian OS key technologies



Symbian OS incorporates powerful, robust technology including:

- rich suite of application engines
- mobile telephony
- browsing
- international locale support
- messaging
- data synchronization
- multimedia
- security
- Java
- support for multiple user interfaces
- communication protocols
- software development (Java and C++)

Symbian OS is a powerful aligning force for the wireless value chain, driving the wireless industry. Mobile phone manufacturers, network operators and software developers are assured that they are working with an industry standard, open operating system that is focused on the mass market.



The architecture of Symbian OS



Licensing Symbian OS



Symbian OS includes a fully-integrated application environment with mobile telephony.

Symbian OS provides:

- an abstract API for 2G, 2.5G and 3G cellular standards; enabling manufacturers to release Symbian OS phones worldwide, across all networks, including GSM, GPRS, EDGE, IS-95 and cdma2000 1X
- a comprehensive integrated messaging environment using MMS, EMS and SMS; email using POP3, IMAP4, SMTP and MHTML; standard attachments; and fax
- communication support for wide area network protocols such as TCP, IPv4, IPv6 (with IPSec) and WAP, and for personal area networks such as infrared, Bluetooth and USB
- international locale support with native Unicode characters, flexible text input framework, and additional font and text formatting (supporting the Unicode Consortium standard)
- rich suite of application engines, multimedia capabilities, programming and content development options, security features and much more.

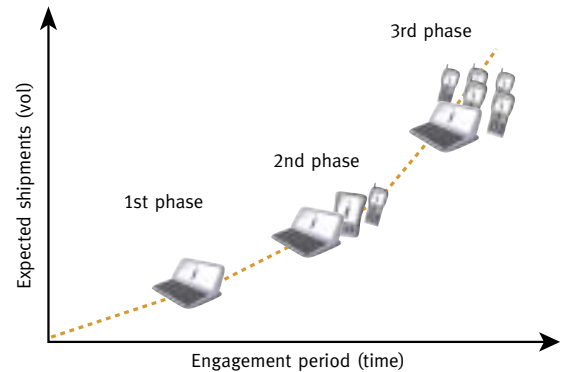
The features of Symbian OS enable the creation of a wide range of compelling, revenue-generating applications and services that can be deployed through all networks.

Symbian operates an open and non-discriminatory licensing policy for Symbian OS. Symbian's revenues are derived from royalties and from technical consultancy work in support of Symbian OS throughout the wireless value chain.

With the exception of certain key modules and third party components, Symbian OS source code is accessible to all licensees and partners, to enable fast and efficient development and to encourage innovation.

Product strategy

Long term and continued success for mobile phone manufacturers relies not on any single product, but on a stream of products. Symbian OS facilitates the creation of families of mobile phones, which consist of individual products sharing common technologies, addressing different market segments.



Code reuse means cost of development falls over time



User interface customization

Symbian OS provides a flexible user interface (UI) framework that enables mobile phone manufacturers to differentiate their products while keeping the learning curve for developers to a minimum.

Advanced mobile phones will come in many forms: from designs resembling today's mobile phones with main input via the phone keypad, to tablet form factors which can be operated with a stylus, to touch screen keyboard-based phones with larger screens and small keyboards. The different input mechanisms and form factors strongly influence the intended primary use of these phones. User interfaces are ultimately both device and market dependent.

With Symbian OS, mobile phone manufacturers and third parties can produce innovative UIs for families of mobile phones such as:

Mobile phones with a numeric keypad.

These require a flexible UI that is easy to navigate with a joystick, soft keys, or jogdial. The Series 60 Platform runs on Symbian OS and supports native Symbian OS and Java applications. Series 60 phones include the Nokia 6260, 6630 and N-Gage QD, Panasonic X700, Sendo X and Siemens SX1. Fujitsu has designed a custom UI for NTT DoCoMo's FOMA network that is used on the F900iT, F880iES and F901iC.



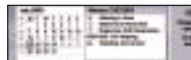
Mobile phones with landscape touch screens.

These media-rich devices include color touch screens to provide a high-quality display for watching streaming video or viewing images. Using on-screen keyboard or handwriting recognition, users can easily add entries to their phonebook or calendar, write email messages or create a document. The Nokia 7710 which is based on the Series 90 Platform is a good example.



Mobile phones with portrait touch screens.

These are ideal for viewing content, like multimedia messages, and browsing content. UIQ is a customizable pen-based user interface for media-rich mobile phones. The Sony Ericsson P900 and P910, Motorola A925 and A1000, BenQ P30 and the Arima U300 are all based on UIQ.



Mobile phones with full keyboards.

These provide an advanced mobile package for users needing to edit information and review business data while out of the office. The Nokia 9200 Communicator series and the Nokia 9500 and 9300 based on the Series 80 Platform employ this type of user interface.

Delivering Symbian OS

Because every mobile phone user has different needs, Symbian OS is designed to support innovation and customization by licensees. To enable this process, Symbian OS is delivered as:

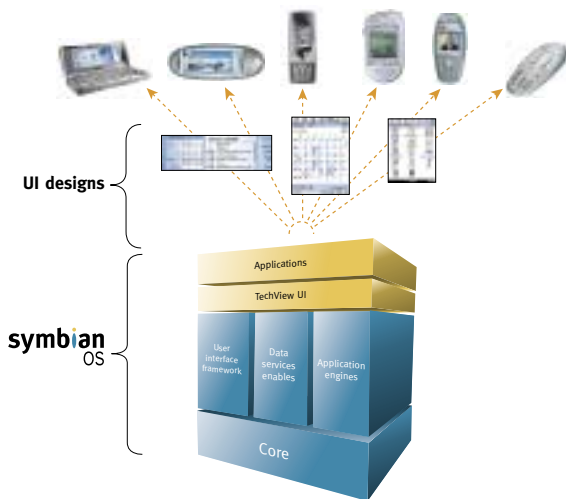
Symbian OS Customization Kit

for Symbian's licensees producing advanced mobile phones. Allows device creation and creation of software development kits (SDKs) for service and application developers.

Symbian OS Development Kit

a toolkit for pre-platform developers creating components for Symbian OS. This covers C++ development (with additional Java and assembler support) and includes a test emulator, documentation, examples and source.

Reference boards, Integrated Development Environments (IDEs) and debuggers are provided by Symbian partners.



TechView UI and common operating system applications are provided to support the development of mobile phones and key technologies

Innovation on Symbian OS

Symbian OS is developed and maintained through industry-wide effort. Some Symbian OS technologies are created by key technology partners and licensee innovations which – where valuable to the wider wireless community – are integrated back into Symbian OS.



Symbian's partners and licensees extend Symbian OS by contributing source code for new technologies. This ensures that the operating system remains an open standard and at the forefront of developments in the industry.



Symbian OS phone development is based on accessible source code, for fast development and increased innovation. As a result, the Symbian OS Customization Kit and the Symbian OS Development Kit include source code. Application software development kits (SDKs) are released by Symbian OS licensees for their platforms and their products.

The Symbian community

Partnering with Symbian

Symbian promotes partnership with technology innovators and service providers throughout the wireless value chain – from Independent Software Vendors (ISVs) to large multinational corporations – to ensure the development and adoption of open standards.

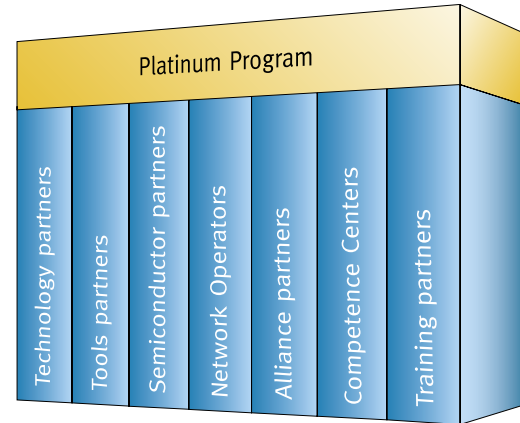
The Symbian Platinum Partner Program is the focal point of an innovative global wireless ecosystem building advanced, open mobile phones with Symbian OS. Symbian has partnerships with providers of key technologies for Symbian OS. Each partner has an area – or areas – of expertise, adding specific functionality to Symbian OS, or specific knowledge to the wireless community. Symbian Platinum Partners benefit from early and additional commercial and technical support, which enables them to produce products and services that support current and future Symbian OS releases. Symbian promotes partner technologies to licensees, operators and other partners, engaging in joint marketing activities, including exhibitions, promotion and PR activities.

The Symbian Affiliate Partner Program recognizes the many application, service and content providers worldwide whose after-market contributions are vital to the continued success of Symbian OS and our licensees' phones. The Affiliate Partner Program is suitable for a wide range of third party developers, including small and medium enterprises bringing leading edge solutions to mobile networks and their customers.

The Symbian Developer Network is at the heart of a global network of developer communities. Through Symbian's relationships with its licensees, operators and partners, over three million developers have the tools and services available to become Symbian OS developers.

Symbian partners

Symbian Platinum Partners are companies that deliver enabling technology to Symbian OS licensees, software developers, network operators and enterprise integrators.



The wireless industry's most exciting technology companies are becoming Platinum Partners. Platinum Partners benefit from early and exclusive access to the Symbian OS Development Kit, including Symbian OS source code. Platinum Partners also benefit from:

- **exclusive distribution rights to derivative works**
- **direct support and services**
- **access to key market channels and pre-market showcase opportunities, including joint marketing, conferences, exhibitions and PR activities.**





Technology Partners

Embedded technology providers

These partners provide technologies such as extended input methods for voice and handwriting recognition, or video and audio-streaming technologies that enhance Symbian OS. They work closely with Symbian OS licensees from an early stage to ensure optimal integration into Symbian OS phones.

Enterprise technology providers

These partners provide the middleware and enterprise application development tools that enable the deployment of secure and standardized enterprise solutions for Symbian OS phones.

Content and service technology providers

These partners provide the technologies that facilitate content and application development and delivery for Symbian OS phones.

Connectivity providers

These partners make industry-standard PIM connectivity solutions. They are designed to keep important information up-to-date and in sync with standard enterprise, web and desktop software including calendar, email, contact- and task-manager. With Symbian's key connectivity partners, there are solutions to suit a wide array of requirements for developing mobile phone connectivity.

Symbian OS product development

Symbian OS provides leading-edge technologies. In addition to development carried out by Symbian's engineering teams, a number of technologies integrated into Symbian OS are provided by third parties. These partners work closely with Symbian engineering teams to provide a wholly tested and validated package of technologies as part of Symbian OS.

Tools Partners

This partner program segment enables third party tools providers to supply the comprehensive set of software development tools and hardware reference platforms that is required for developing hardware and software based on Symbian OS.

Semiconductor Partners

Symbian works closely with semiconductor vendors that provide silicon solutions to mobile phone manufacturers based around the ARM architecture. This segment of the partner program allows semiconductor manufacturers to appreciate the architectural hardware requirements of Symbian's technology. Contributions from partners provide Symbian with a clear view of how mobile phone hardware platforms will progress.

Common hardware architectures make the process of creating new products simpler for licensees, resulting in significant reductions in time-to-market for new designs.

Operators

Network operators engage with Symbian to leverage the full potential of Symbian OS in delivering advanced applications and services. This spans a broad spectrum of activities from long-term technology and market planning to immediate cooperative programs between developer communities.



The Symbian Developer Network



Alliance Partners

These partners operate in diverse business domains using several commercial models across the mobile value chain. Though they do not necessarily deliver directly to Symbian OS licensees, they are strategically impacted by the evolution of Symbian OS open platforms and proliferation of Symbian OS phones.

Competence Centers

To speed up product development of Symbian OS phones, Symbian has established a program for Symbian Competence Centers. These are independent companies that have the specialist skills and expertise to contribute to management, creation and development of Symbian OS phones. These companies specialize in developing software for Symbian OS and share a close relationship with Symbian and Symbian OS licensees. They carry out development and professional services projects with licensees.

Training Partners

Symbian meets the demand for Symbian OS training with an international Symbian Training Partner program. Symbian Training Partners are either training companies, or groups within larger organizations, offering training services.

With a global focus, Symbian is able to serve local developer demand for training on Symbian OS. Symbian works closely with Training Partners to maintain and develop the quality, coverage and availability of training.

For more information: www.symbian.com/partners

The Symbian Developer Network provides access to a range of resources and services for Symbian OS developers, with support for C++ and Java programming languages. As well as offering a wealth of information ranging from programming tips to example code, it also serves as a portal to the training and support programs, SDKs, tools and other resources provided by Symbian partners and licensees worldwide.

This Symbian Developer Network offers:

- **Symbian OS Developer Library**
- **C++ and Java example code**
- **tools and utilities**
- **tech tips and knowledge base**
- **developer papers and tutorials.**

Developer Training

Symbian's Technical Training team offers a variety of courses, some bespoke, on software development for Symbian OS.

In addition to regular standard developer courses, there is a curriculum of advanced material suited to specialist developers and partners. Some of the courses used to train Symbian engineers can also be offered to external parties. (See also Training Partners).

For more information: www.symbian.com/developer/training



Symbian Press

Symbian Press is a partnership between Symbian and international publisher John Wiley & Sons. It produces definitive literature for the wireless community, designed to:

- enable developers to create great code and applications for Symbian OS
- further propagate wireless industry standards
- complement the Symbian Developer Network's wireless developer community.

For Symbian OS C++ Developers:

- Symbian OS C++ for Mobile Phones: Volume 1
- Symbian OS C++ for Mobile Phones: Volume 1 (Japanese edition)
- Symbian OS C++ for Mobile Phones: Volume 1 (Chinese edition)
- Symbian OS C++ for Mobile Phones: Volume 2
- Symbian OS Explained
- Symbian OS Communications Programming
- Programming for the Series 60 Platform and Symbian OS
- Symbian OS Internals [forthcoming]

For Enterprise and IT Professionals:

- Programming PC Connectivity Application for Symbian OS
- Rapid Mobile Enterprise Development for for Symbian OS

For Java Developers:

- Programming Java 2 Micro Edition on Symbian OS
- Wireless Java for Symbian Devices



For more information: www.symbian.com/books

Symbian Expo



symbian
expo

the smartphone show

The Smartphone Show

The annual tradeshow brought to you by Symbian and the global mobile industry. Symbian Expo is the only tradeshow that covers every aspect of the smartphone market, from building mobile phones themselves to developing and deploying applications to mobile phone users.

Contact symbian@informa.com for further information about sponsoring or attending the next event.

For more information: www.symbian.expo.com

Online sources of information

Symbian's website www.symbian.com contains detailed information about Symbian OS for the wireless community, including:

- **Symbian Developer Network**
- **details of Symbian OS releases and Symbian OS phones**
- **key technologies, white papers and developer papers**
- **the latest news in the Symbian community**
- **trade shows and conferences that Symbian, licensees and partners attend**
- **details of the latest training programs.**

Mobile phone manufacturers with a full Symbian OS license:

www.arima.com.tw	www.panasonic.co.jp/global
www.benq.com	www.samsung.com
www.fujitsu.com	www.sanyo.com
www.lenovogrp.com	www.sendo.com
www.lge.com	www.siemens.com
www.motorola.com	www.sharp-world.com
www.nokia.com	www.sonyericsson.com

Mobile phone manufacturers with Symbian OS development license:

global.mitsubishielectric.com



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For news and updates from Symbian see www.symbian.com/media. The website contains technical information, product details, news updates, job opportunities and information about Symbian OS licensees and partners.

Trademarks, copyright, disclaimer

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