ACCESS’ Approach to the Global Markets
ACCESS Co., Ltd. Company Profile

- Founded in 1984
- Founders: Toru Arakawa (President & CEO)  
  Tomihisa Kamada (EVP & CTO)
- Public Listing: Tokyo Stock Exchange (4813) since 2001
- Offices: Headquarters in Tokyo  
  About 600+ people in world-wide
- Share Holders
  Founders (Arakawa, Kamada) about 35%
  Strategic Partners:  
  NTT DoCoMo (9.6%), Motorola (1.9%), NEC (0.5%),  
  Panasonic (0.5), Mitsubishi (0.5), Fujitsu (0.5), Toshiba (0.5)

ACCESS Systems Europe  
(Oberhausen, Germany)

ACCESS U.S. Branch  
(California, U.S.)

ACCESS China  
(Beijing, China)

Sales Offices: Taiwan, Korea, France, Italy, Spain, UK, Brazil
ACCESS provides a set of client software for enabling Internet access on embedded and mobile devices.

**Advanced Browser**
- NetFront® v3.0
- JV-Lite® 2
- MIDP2/Doja
- JAVA

**Plug-ins**
- PDF Reader
- Flash
- HI 3D

**Communication**
- AVE-TCP
- IrFront™
- AVE-Blue
- AVE-USB

**Security**
- AVE-SSL

**OS**
- AVE-File

**Messaging-Mail**
- SMTP/POP3, M-IMAP, MMS

**Alliance Partners**
- Adobe
- Macromedia
- RealNetworks
- PacketVideo
- MASCOT

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Business Structure

Providing Solutions for Mobile Carriers to Promote their ARPU

Providing “Mobile Platform Solutions”

Providing “Service Spec” for Carrier

Our technology increased the number of content providers & achieved high ARPU

Reason: cHTML is more similar to HTML than HDML

The number of HDML contents providers did not increased as much, resulting in low ARPU

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Our Business Model

How we provide “Mobile Platform Solutions”
for HSV and Mobile Carriers?

Providing “Service Spec” for Carrier
Against risk of software internalization and to lead de facto standard technology

NRE service
License service
Handset Vendors
Handset Vendors
Mobile Carrier
Our Profit Earning Model

How we can earn profit by software development & consulting for non-PC Terminals?

- NRE Income
- Sales
- Development Of Core Software
- Royalty Income
- Sales
- ACCESS with Outsourcers Merchandise Phase
- R&D/NRE in ACCESS Development Phase

Time Series
ACCESS NetFront is suitable for a broad range of applications, incorporating sophisticated architecture that meets the demand for cell phones that are easy and fun to use while incorporating complete Internet capability.

Big change in architecture needed to support DOM and D-HTML

DOM
Dynamic HTML (Full Browsing)

Embedded engine (real-time, extensible, reliable, …)

Browser design change needed for use as an application in cell phones

PC browser made compact by removing certain functions

PC browser

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PC browser
ACCESS covers all kinds of device categories.

ACCESS covers all kinds of platforms.
Symbian OS, Palm OS, Linux, VxWorks, uITRON, Windows CE, BREW, …
ARM/StrongARM, SH, MIPS, Intel, Power PC, …
A number of services have emerged with infrastructure providers taking the lead in determining specs. Service platforms have already been established.
ACCESS has been developing new data services based on Internet technologies.

### Browser Capability

<table>
<thead>
<tr>
<th>1999</th>
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<th>2005</th>
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- **1999**
  - i-mode® Launch

- **2000**
  - KDDI EZ Mail®

- **2001**
  - Global i-mode

- **2002**
  - 3G FOMA® EZ Channel

- **2003**
  - Beyond WAP2.0

### Features

- **IrDA Communication**
- **3D Polygon Graphics**
- **C-HTML**
- **GIF Support**
- **Java Support**
- **SSL Support**
- **JPEG Support**
- **Color Support**
- **Ring Tone Support**
- **Download Support**
- **Mega-Pixel Camera Flash Support**
- **SMIL Player (EZ Channel)**
- **Video Download TV-Conference**
- **Beyond WAP2.0**
- **Global i-mode®**
- **KDDI EZ Mail®**

### Technologies

- HTML Mail
- Anti-Virus Engine
- Video Download
- TV-Conference
- 3D Polygon Graphics
- 3D Polygon Graphics
- Camera
- Camera
- Flash Support
- Flash Support
- Color Support
- Color Support
- Ring Tone Support
- Ring Tone Support
- Download Support
- Download Support

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Advances in Platforms and Communication Systems of Major Global Operators

Orange
WAP2, Java, GPRS→3G

H3G
WAP2, Java, W-CDMA

T-Mobile
WAP2, Java, GPRS→3G

Vodafone
WAP2, Java, GPRS→W-CDMA

China Unicom
WAP2, Java, CDMA1x→3G

China Mobile
WAP2, Java, GSM→W-CDMA

NTT DoCoMo
WAP2, Java, CDMA1x→W-CDMA

FOMA
WAP2, Java, CDMA1x→EV-DO

Vodafone
WAP2, Java, CDMA1x→EV-DO

KDDI
WAP2, Java/BREW, CDMA1x/EV-DO→EV-DO

WAP2, BREW, GPRS→EDGE

WAP2, BREW, CDMA1x→EV-DO

Cingular
WAP2, Java, EDGE/GPRS→W-CDMA

AWS
WAP2, Java, EDGE/GPRS→W-CDMA

Sprint
WAP2, Java, CDMA1x→EV-DV

Verizon
WAP2, BREW, EVDO/CDMA1x→EV-DV

Telcel Mexico (America Movil)

VIVO (Telefonica)

*Source: Web sites of the companies shown
Change in Global Market Shares of Cell Phone Manufacturers
(2003 4Q-2004 4Q)

*Sources: Gartner Group (2004-2005)

2003/4Q
- Total: 157,285,300 units
- Samsung 10%
- Siemens 10%
- LG 6%
- NEC 2%
- Sony Ericsson 5%
- Sanyo 1%
- Others 12%

2004/4Q
- Total: 195,320,500 units
- Nokia 33%
- Motolora 16%
- Samsung 12%
- Siemens 6%
- LG 7%
- Sony Ericsson 6%
- Sagem 2%
- NEC 1%
- Sanyo 13%
- Others 13%

Total: 157,285,300 units

Total: 195,320,500 units
Now supplying software to about 30 mobile device manufacturers

Major operators

- NTT DoCoMo
- Global i-mode alliance
- (KPN, e-PLUS, BASE, KGT, Bouygues, Telefonica, WIND, COSMOTE, Telstra, ....)
- KDDI
- Vodafone Global
- Orange
- T-Mobile
- Hutchison 3G Group
- Cingular / AT&T
- Sprint PCS
- Verizon
- China Mobile
- China Unicom
- China 3G (Trial)
- (TD-SCDMA, W-CDMA)
- ....

ACCESS’ Mobile Solution

NetFront Solution
(portion common to all versions)

OS (Symbian, Linux, BREW ...)

Without relying on OS, compatible with any platforms
In recent years, overseas communication carriers have switched to carrier-originated services just as in Japan. But there is an urgent need at overseas carriers for help in determining specifications and business models for exclusive services, a task where these companies have no experience.

**NetFront Dynamic Menu**

- **Push content**
  - News, information on events and other information are displayed using the mobile phone’s standby screen.

- **Provision of various standby screens**
  - Provide users with many styles of standby screens, seasonal screens and others to offer greater variety.

Mobile Operators can easily create exclusive services and set themselves apart from competitors!

Mobile phone top screen

Provide services directly through the top screen, which users view quite often.
Outside Japan, there are still few content providers that focus exclusively on mobile content. It is difficult to create their own official site, since this is a developing market.

- View general web sites (for PC) on mobile phones
  By incorporating browsers with this capability in handsets, contents for PC can be viewed on a mobile phone screen.

Smart-Fit Rendering

Permits rapid launch of service because communication carriers can allow customers to view general web sites without offering specialized content for cell phones.
Handset makers must constantly produce models that conform to the specifications of different mobile operators. Furthermore, they need to operate efficiently and introduce a diverse lineup of models in a timely manner. Success also demands offering unique functions to differentiate models from those of competitors.

**NetFront Mobile Client Suite**

*A Total Solution for Next-Generation Mobile Phones*

Integrates all major applications required to launch mobile phones

Dramatically reduces development steps by providing linked function support for applications (Advantages are particularly great for providing browsers, messaging and Java in a single package.)

Supports the unique expansion specs of communication carriers

Operator A  Operator B  Operator C

NetFront Solution
(portion common to all versions)

Compatible with OS/Platform of all carriers

A software line with a scalable structure allows manufacturers to implement it in various models easily and efficiently!

Easy to offer distinctive characteristics for each manufacturer because user interfaces can be easily customized!
CASE 1: Nokia

Nokia

- Supplies handsets globally, offering models with unique features extending from the low to high end.
- Until recently, large European manufacturers like Nokia had created their own specifications, but, as was noted earlier, operators are now taking the lead in determining specifications.
- Because Nokia uses its exclusive specifications, it has difficulty supplying models that conform to the specs and service specs of individual operators while protecting its valuable brand and pricing power.

The ACCESS proposal

Combine the technological resources and extensive experience in technological negotiations with ACCESS partner operators with Nokia’s skill in developing handsets to supply models extending from the low to high end that can easily match the specs of any carrier.

Existing projects involving Nokia:
- Nokia selected NetFront v3.2 as a MMC bundled browser of their newest handset, Nokia 6670
- NetFront v3.1 for Series 60
- Download sales from Nokia official sites
- Supply of handsets to China Unicom
- Adoption of M-IMAP
- Now discussing other projects

NetFront Solution (portion common to all versions)

Operator A  Operator B  Operator C

Nokia Series 60 Platform

Supports the unique scalability specs of each carrier
Nokia 6670 Bundles NetFront v3.2 + PDF

Nokia 6670 (Symbian/Series 60 based phone) for world-wide market, bundles:

- NetFront 3.2 Full Internet Browsing
  General Internet Sites
  “Desktop view” mode
  “Smart-Fit Rendering” mode
- PDF Reader (Joint development with Adobe)

The first one in the world!
- The most advanced Mobile Browser
Case 2: Samsung

Samsung
- Samsung has greatly increased market share by offering models that match the specs of operators worldwide and reflect regional market characteristics.
- But since Samsung serves each market with a vertical division of tasks, there are concerns about declines in efficiency and higher development expenses.

The ACCESS proposal

Using the ACCESS solution greatly reduced the number of development steps (thus cutting expenses) and enabled the timely introduction of new models.

Existing projects involving Samsung:
- Browser, Java and other software used in S341i, their International i-mode handset.
- Supply of handsets to China Unicom Adoption of M-IMAP
- Now discussing other projects involving other handsets and other information consumer electronics
ACCESS will supply all types of technology involving browsers and other Internet software to Samsung Electronics, the world’s second-largest producer of mobile devices, and Sony Ericsson, which ranks sixth.

**Advanced Browser Suite**
- NetFront Mobile Client Suite
- NetFront

**Advanced HTML Browser**
- NetFront

**Java Virtual Machine**
- JV-Lite

**Third-Party Plug-ins**
- Adobe PDF Reader
- Macromedia Flash
- RealNetworks Helix

**Communication Protocols**
- AVE-TCP, IrFace
- AVE-Blue, AVE-USB

**Security**
- AVE-SSL

**Operating System**
- uMore, AVE-File

**Messaging/Mail**
- SMTP/POP3
- M-IMAP, MMS

Enhanced time-to-market through quick responses to the specs for the latest functions of operators worldwide and to platforms of all types.

Can easily cover entire product lines, from high to low-end models.

High-performance Internet technology that existing browser suppliers cannot match.
NetFront v3 supports the WAP2.0 (XHTML-MP, WCSS) and OMA standards while covering the W3C full Internet specs.

SMIL, SVG, CSS, DOM and ECMAScript are all critical elements.

ACCESS has played an active role in formulating specs for W3C, OMA, 3GPP/3GPP2 and other standards.

W3C cHTML, XHTML Basic
W3C SMIL 2.1 Editor
OMA Browsing ETR Editor etc...
ACCESS will supply integrated total solutions for handset software through technological partnerships with third parties. The goal is to add functions in line with progress in hardware.

Makes of handsets and other wireless terminals (customers for ACCESS software)

Supplied by ACCESS

- **Browser application**
- **Comprehensive messaging application**
- **JAM**
- **Data folder**
- **Telephone directory calendar To-do Memo**
- **SyncML OBEX**
- **Browser Engine (SMIL, SVG, PDF)**
- **Mail/Msg Engine**
- **MIDP2 CLDC VM**
- **DRM**
- **Partner modules**

Shared middleware (communication, drawing, encryption module, others)

Transplant layer (provided for each type of hardware)

- **OS 1**
- **OS 2**
- **OS 3**
- **OS 4**
- **OS 5**
- **CPU 1**
- **CPU 2**
- **CPU 3**
- **CPU 4**
- **CPU 5**

Incorporation of modules from third-party partners

- Adobe PDF
- Voice recognition, synthetic moving image player
- Scalable Font

Work has been completed through collaboration with major OS and CPU vendors. Collaboration now under way for next-generation applications.

Revenue sharing business model
ACCESS is proposing “Full Internet Browser” including PDF for accessing large Internet web pages on mobile phones.

(1) Full Internet Browser  
“Smart-Fit Rendering” for General Web Sites

(2) PDF reader Optimized for Mobile  
Joint development with Adobe

Commercial examples:  
Nokia 6670 (MMC bundling)  
Treo600/650  
NetFront for PocketPC

Keeping the original styles as much as possible.
Full Browser Enables New Revenue Chances

With NetFront Full Browsing, Operators can provide a new business framework for general Internet content/service providers.
Full-Scale Commencement of Terrestrial Digital Broadcasts

- Created a dual-function browser compatible with terrestrial digital broadcasts (BML) and HTML content
  - Also includes HTML function

- Features
  - Remote operation possible (uses colored buttons)
  - Program-linking through broadcast expansion events
  - Accommodates digital TV requirements, such as interactive communications

- NetFront DTV Profile
  - Displays ordinary web sites on large-screen TVs
  - Display adjusts to match image width for easy viewing
  - Integration possible with Flash, Helix Client, Adobe Reader and many other plug-ins

Tab browser function (3 URLs can be registered with colored buttons) for one-button viewing simplicity
ACCESS has developed a one-segment broadcasting service browser that is based on the mobile browser (XHTML/HTML) and integrates digital TV browser (BML) know-how. Able to share elements common to mobile web browsers.

Now developing prototypes with goal of 2005 year-end commercialization

Basic functions:
- XHTML + CSS + ECMAScript
- Scalability function for broadcast reception
- Links to other cell phone applications

Various Services (Commerce)
Technology and Other Core Strengths of ACCESS

1. Leadership in advanced browser technology
   - SMIL, SVG, PDF
   - XHTML+Voice
   - Full browsers
   - Mobile TV
   - NetFront “Mobile Client Suite”
     - Browser
     - MMS/M-IMAP-Mail
     - Java (Doja/MIDP)
     - Provision of DRM, SyncML and others as a set

2. Network home electronics terminal platform, centered on browsers
   - Co-establishment of specs with carriers
   - End-to-end content support
     - Content provision
     - Consulting, IOT
     - Development of Java applications
     - Server components and many other services
   - Alliances formed with major OS and CPU vendors
     - symbian
     - NOKIA
     - Qualcomm
     - MontaVista
     - PalmSource
     - brew.
     - DoCoMo
     - HI (3D engine)
     - IBM (VoiceXML)
     - Text fonts

3. Leadership in standardization
   - W3C, OMA, 3GPP, 3GPP2
   - DoCoMo overseas i-mode alliance partners and
   - KDDI
   - Sprint PCS
   - H3G
   - China Unicom
   - China Mobile
   - Bell South
   - Telcel
   - Many browser-related patents
     - Patents approved 53
     - Patents pending 101 (Feb. ‘05)

ACCESS leadership
Collaboration with key partners worldwide

More than 30 partner cell phone manufacturers
Third-party alliances involving plug-ins and other key technologies
SyncML and others as a set

① ② ③