



**FY2007 ACCESS Products  
and  
Technologies Update**

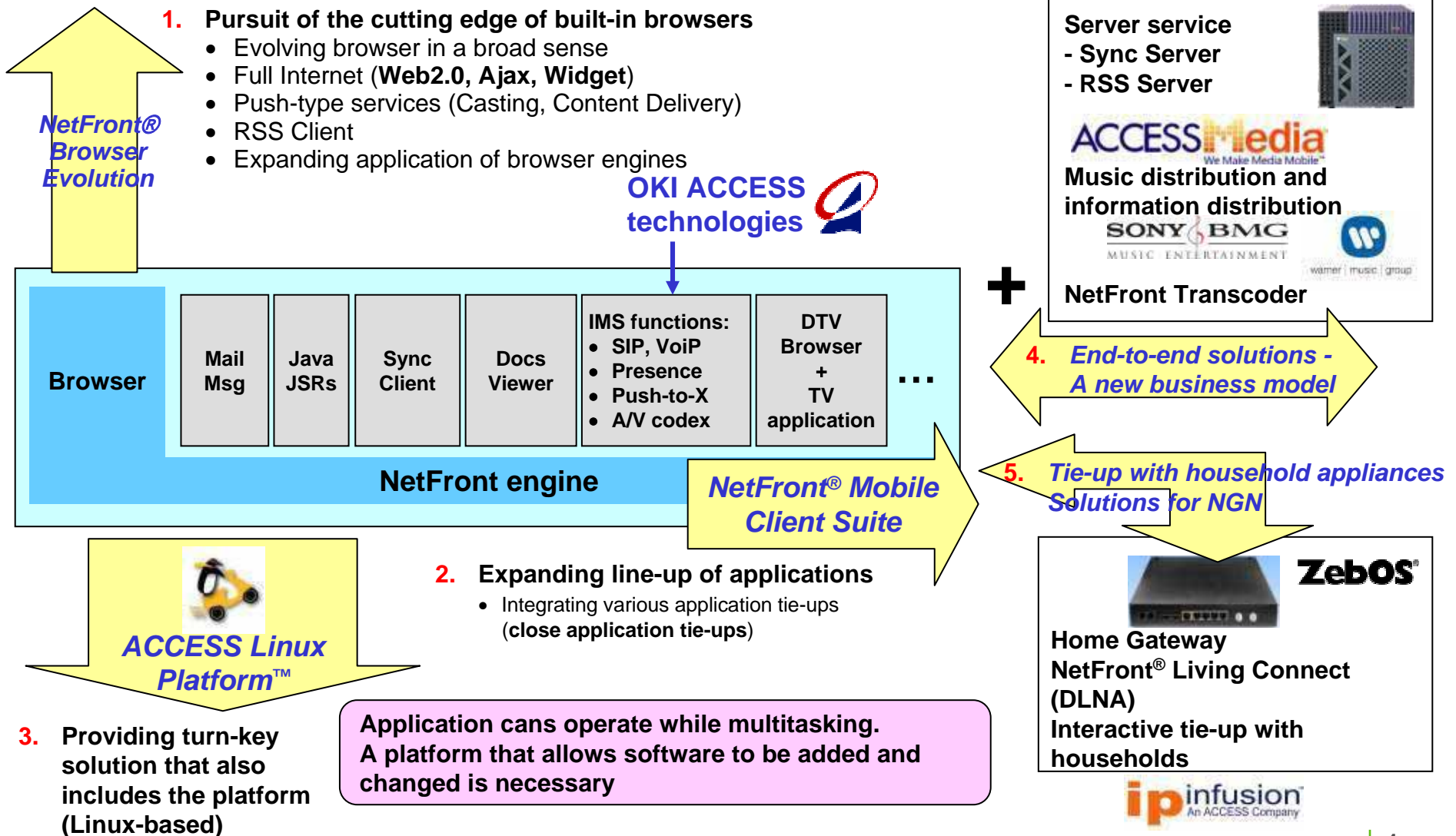
**ACCESS CO., LTD.  
Co-Founder, EVP & CTO  
Dr. Tomihisa Kamada  
March 25<sup>th</sup>, 2008**

# Comprehensive Strength of the ACCESS Group



- Providing a key technology for the full advent of a ubiquitous era

Anticipating required functions and mechanism for handsets, and providing software and total solutions for handsets



# Provide Various Software for All Domestic Operators



## NetFront Mobile Client Suite

Software components for mobile handsets are increasing so that more time/cost has been increasing for integration work. **ACCESS** can provide a set of major components.

### Components:

- NetFront™ Browser
- NetFront™ Message Client (SMTP/POP3, M-IMAP, MMS)
- JV-Lite™2 Wireless Edition (MIDP, JTWI, Doja) + JAM
- NetFront™ SMIL Player
- NetFront™ SVG Viewer
- NetFront™ Sync Client
- NetFront™ Document Viewer
- NetFront™ IMS Client
- NetFront™ Media Player
- NetFront™ Living Connect
- NetFront™ MobiTunes
- ...



i-mode Browser  
Deco-mail  
PDF  
Doja(partly)  
Full Browser  
TV Browser  
SyncML  
Doc Viewer(partly)



EZ Mail  
EZ Channel(SMIL)  
EZ Channel Plus  
Decoration mail  
TV Browser  
Digital radio  
SyncML  
Lapping Mail  
MobiTunes(TV app)



Browser  
Full Browser  
Live Monitor  
RSS(S!Cast)  
S!Mail  
TV Browser  
IMS(SIP, Presence  
Push to Talk)  
MobiTunes(TV app)



Browser  
Full Browser  
Mail  
Java  
PDF  
DoC Viewer  
Full Browser  
Others



Browser  
Full Browser  
Mail  
Java  
Full Browser  
Decoration Mail  
TV Browser  
MobiTunes  
(TV app)

# Strong NetFront Strategy – Making the Internet Mobile



## NetFront Browser Widgets A Comprehensive Widget Platform

- W3C compliant
- Possible to download
- Manage using Widget Manager
- Display in standby screen
- Widget certified



# NetFront Browser Widgets



# Why ALP?

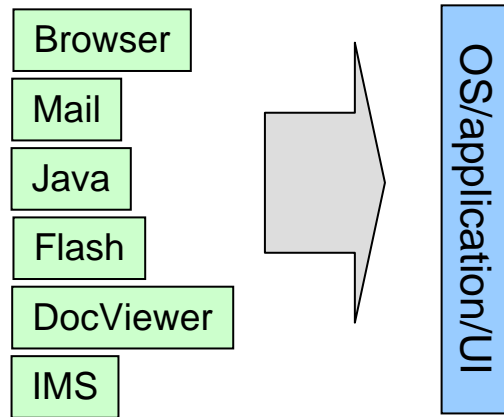


- Changing industry structure
  - Explosive growth in the volume of software
  - Shift in mobile handset manufacturers' focus
  - Sense of crisis among operators
- Growing focus on Linux
  - Nokia is focusing on the Linux platform for WiMax mobile handsets
  - Linux-based products are gradually spreading from high-end to middle zone
  - ACCESS and Orange are also participating in LiMo, promoting a Linux platform
- Convergence
  - In the future, the boundary between digital devices with Internet access capabilities, such as TV, digital cameras, and car navigation systems will blur. Linux-based software platforms will be shared among product categories.

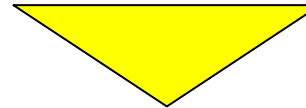
# Changing Industry Structure (1) – Explosive Growth in the Volume of Software



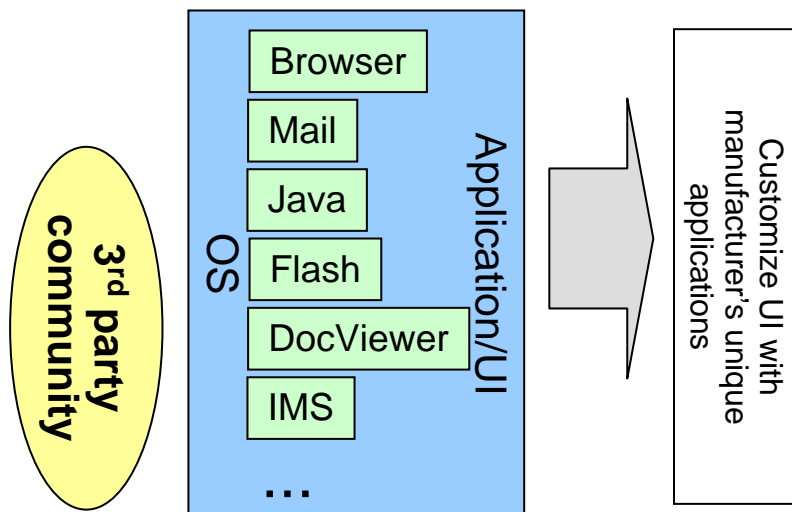
## ○ Development style up to now



Manufacturers incorporate 3rd party components. Integrating work by manufacturer was difficult. The number of combinations increase exponentially. Increase in development costs - not paid for.



## ○ Software platform is necessary



Manufacturers have reduced development cost and time by using integrated platforms. Manufacturers are concentrating their resources on items that they should focus on.

### Platform requirements:

- Modern OS based
- Provide both application and middleware to a certain degree
- Incorporation of SDK and 3rd party (open OS)

SymbianOS + S60 (Nokia)  
Windows Mobile (Microsoft)  
Linux-based ALP (ACCESS)  
Android (Google)

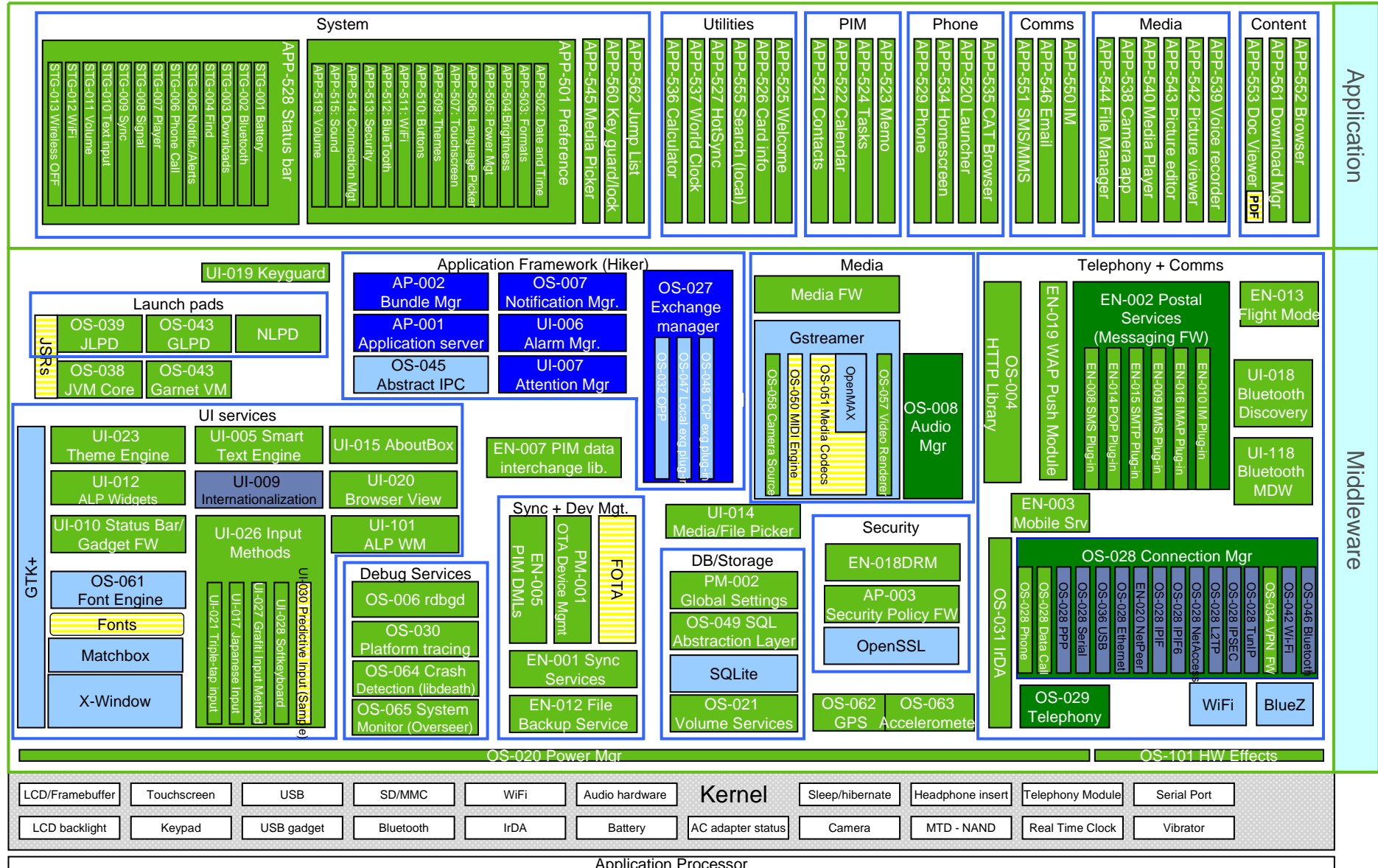
# ALP – Turnkey Software for Mobile Handsets



Open Source Software

ACCESS Proprietary

3rd Party



# Changing Industry Structure (2) – Shift in Manufacturers' Focus

- Shift from function-based competition to usability based competition (iPhone effect)
- There is a desire for a software platform that has all the functions and can implement flexible UI/UX. The time to market is the key.
- Focus is on Linux
  - For S60 and WindowsMobile, the UI style is fixed.
  - For ALP, handsets with various styles can be developed.

## Traditional



## Internet-focus



## Widgets on Mobile desktop



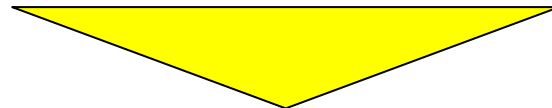
## 3D Visual Effect



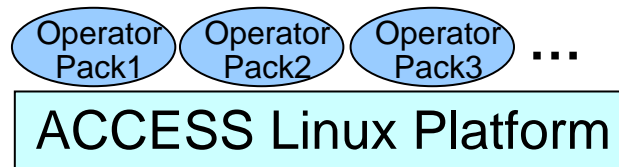
# Changing Industry Structure (3) – Sense of Crisis among Operators



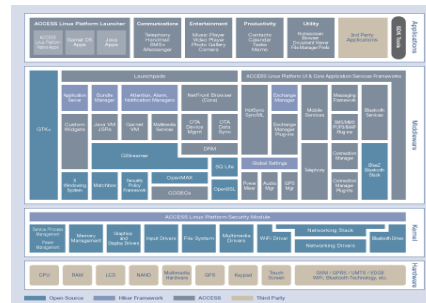
- Nokia’s share of the handset market is large (38%), bundled with service (Ovi)
- Internet service vendors, such as Google and Apple, have entered the market
- There are concerns that the operators will become the pipe
- On the other hand, it is also becoming difficult to ask manufacturers to add new application service. Decreasing handset costs is also an issue



Develop operator pack based on Open OS



Manufacturers can easily expand to various operators and can focus on unique added value items

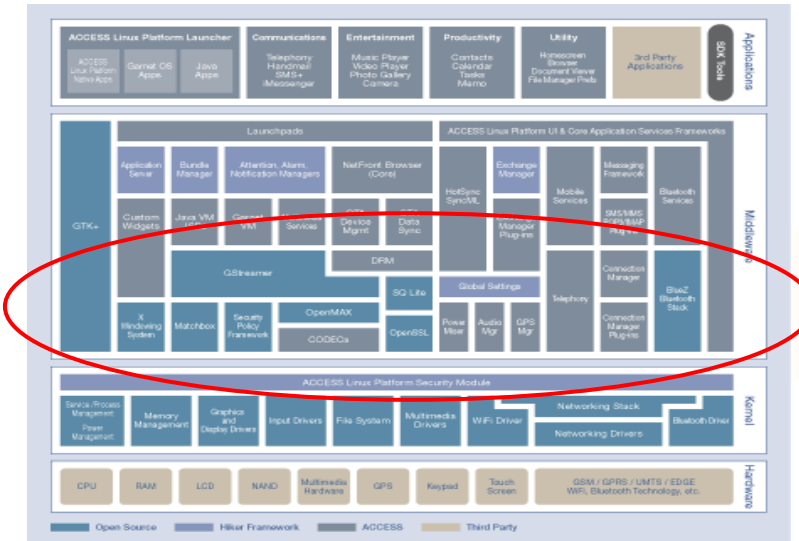
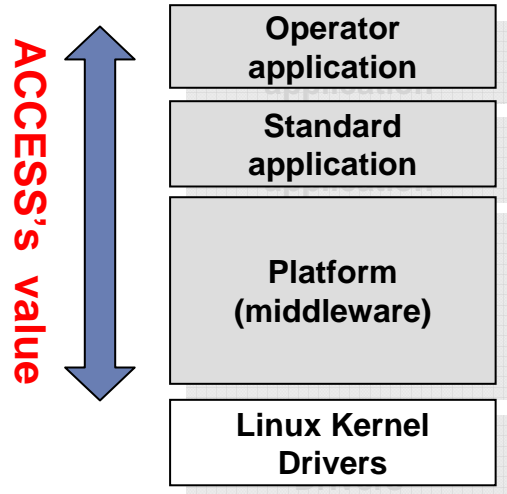


- An operator pack for Orange has already been developed
- An operator pack for DoCoMo is being developed
- In the future, ACCESS will continuously create operator packs

# Objective of LiMo and ACCESS' Activities



- ACCESS and Orange are members of LiMo (February 11)  
The main members promoting Mobile Linux are taking part, and industry powers have come together in LiMo
- Promote a Linux platform necessary for operators to realize their main services
- ACCESS's role
  - Develop ALP (LiMo compliant) products
  - Provide to, support, and customize for manufacturers
  - Provide SDK
  - Develop and provide operator pack



# ALP + Orange Pack



- Collaboration with Orange for Linux platform
  - Press release – August 14, 2006
  - Joint ALP development of application pack for Orange services



- The Orange pack is a suite of applications that make it possible for Orange to implement its services, such as Orange TV, Orange Music, Orange Messaging, and Orange Homescreen and also includes 3rd party applications



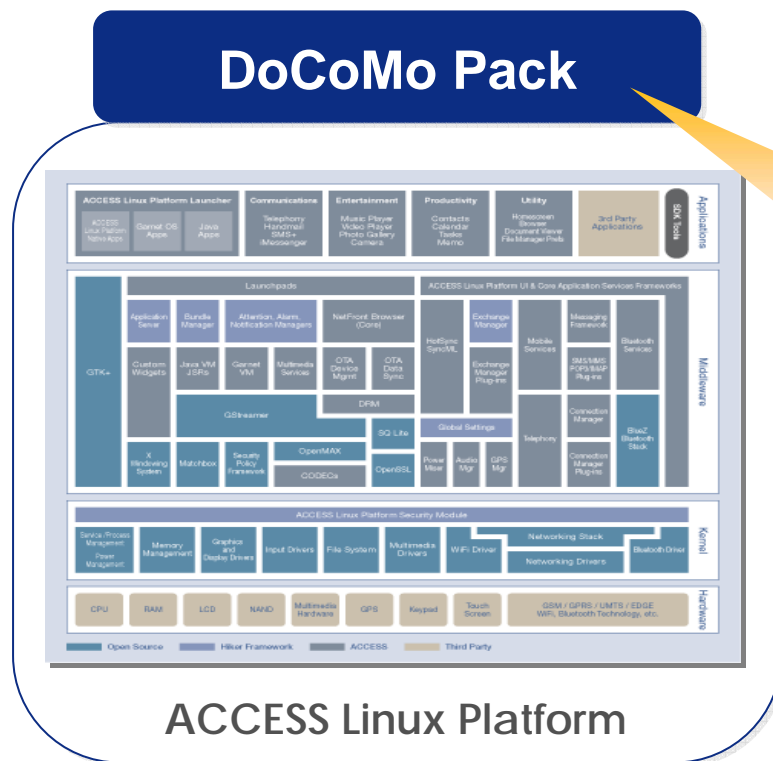
- ACCESS is providing to manufacturers the suite as version verified through the integration of ALP and Orange pack
- First model: SAMSUNG (SGH-i800) (in 2H 2008)

# ALP + DoCoMo Pack



ACCESS is leading the development of a DoCoMo pack, a platform for DoCoMo based on ALP

Building a system in partnership with NEC, Panasonic, and ESTEEMO



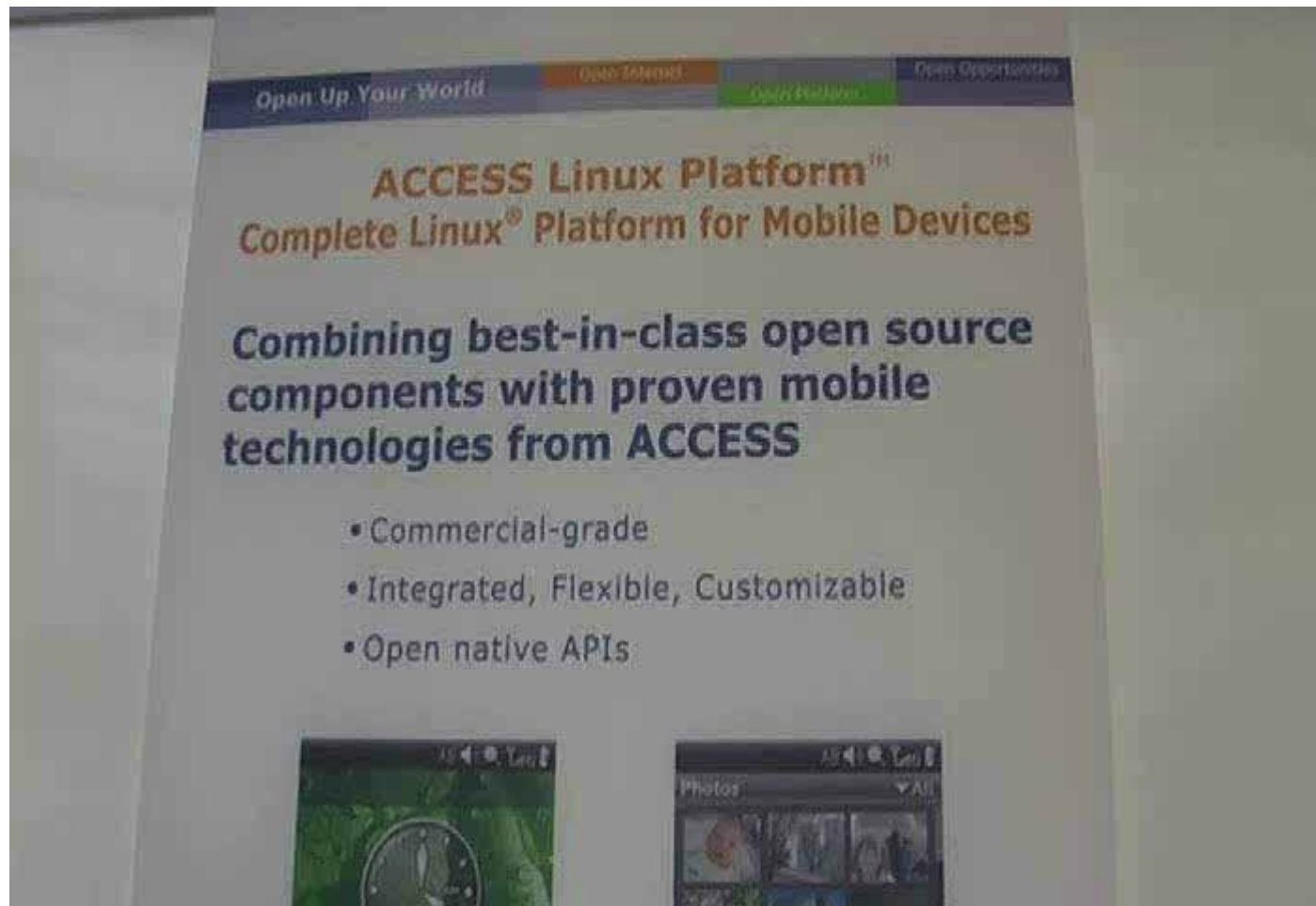
i-mode Browser  
 i-mode Email (Deco mail)  
 i-channel  
 i-motion (Movie)  
 Doja (DoCoMo Java)  
 DoCoMo UI  
 and many other

- Increases efficiency of handset development
- Makes expanding overseas easier for Japanese vendors
- Makes entering the Japanese market easier for overseas vendors



# Presentation of the Latest Version – ALP v2 Supports Various Hardware





# ALP Strengths: 3rd Party Community



With ALP, in addition to being able to run existing Palm OS® applications, by providing SDK, ACCESS is providing an environment on which Linux native applications, Java™ applications, and Web2.0(Ajax) applications can run, giving developers with a wide-range of choices.



**ALP Linux native apps**



**Garnet™ OS apps  
(runs Palm OS® applications)**



**Java apps**



**Web 2.0  
(Widget applications)**

Launch of free downloads of **Garnet™ VM** evaluation version for Nokia Linux handsets.  
(November 13, 2007)  
Popular among developers .



ACCESS Partner Program  
The number of ACE member has increased to **85** companies  
(as of February 2008)



# ALP SDK Has Started to Be Widely Distributed (Feb. 12, 2008) <http://accessdevnet.com/>

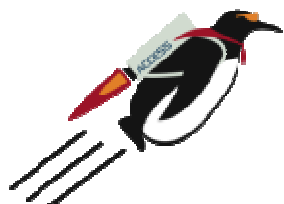
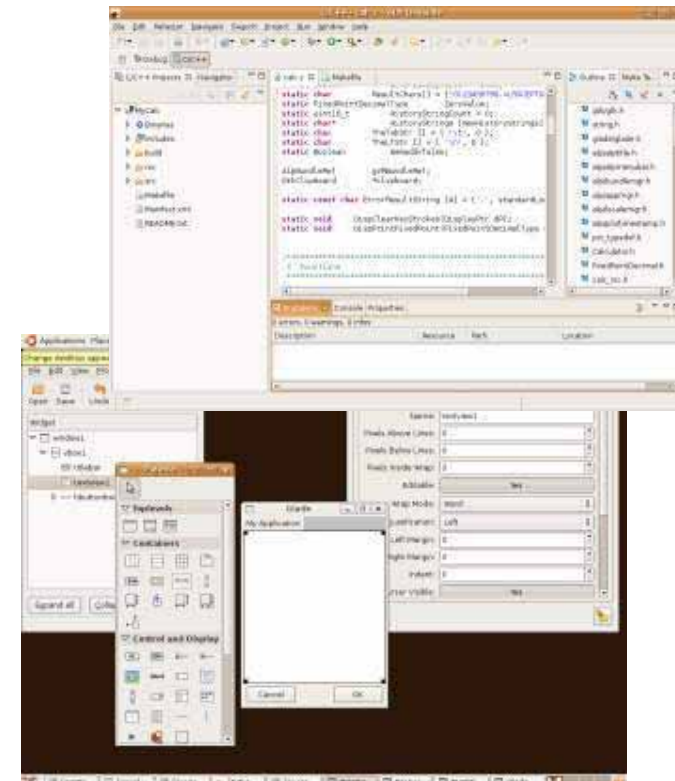


## ACCESS Developer Network



During one month, more than 700 3rd party developers actively developed ALP applications.

## ALP SDK 2.4 (development suite)



# Examples of Native ALP Application

### G-Tris Game



elements interactive

### Voice Commander



### Home Screen



# ALP SDK – Easy to Port, Easy to Deploy



- A message from a developer

Joost Pisters, *Development Manager, Elements Interactive*



# ALP SDK – Popular among Developers



"The public launch of the ACCESS Linux Platform Development Suite **leverages the experience and passion of mobile developers to innovate** new product concepts and services for ACCESS Linux Platform."

Yves Christol, Devices Director,  
Device Development, Orange Group



"The ACCESS Linux Platform SDK is **a well-integrated system, with a powerful IDE, complete device emulation and comprehensive documentation**. It was simple to set up, familiar, and easy to use."

Ross Burton, OpenedHand



"Having extensive experience with most major mobile platforms tools and SDKs, **we have been impressed by the ease of development** that the ACCESS Linux Platform Development Suite provides."

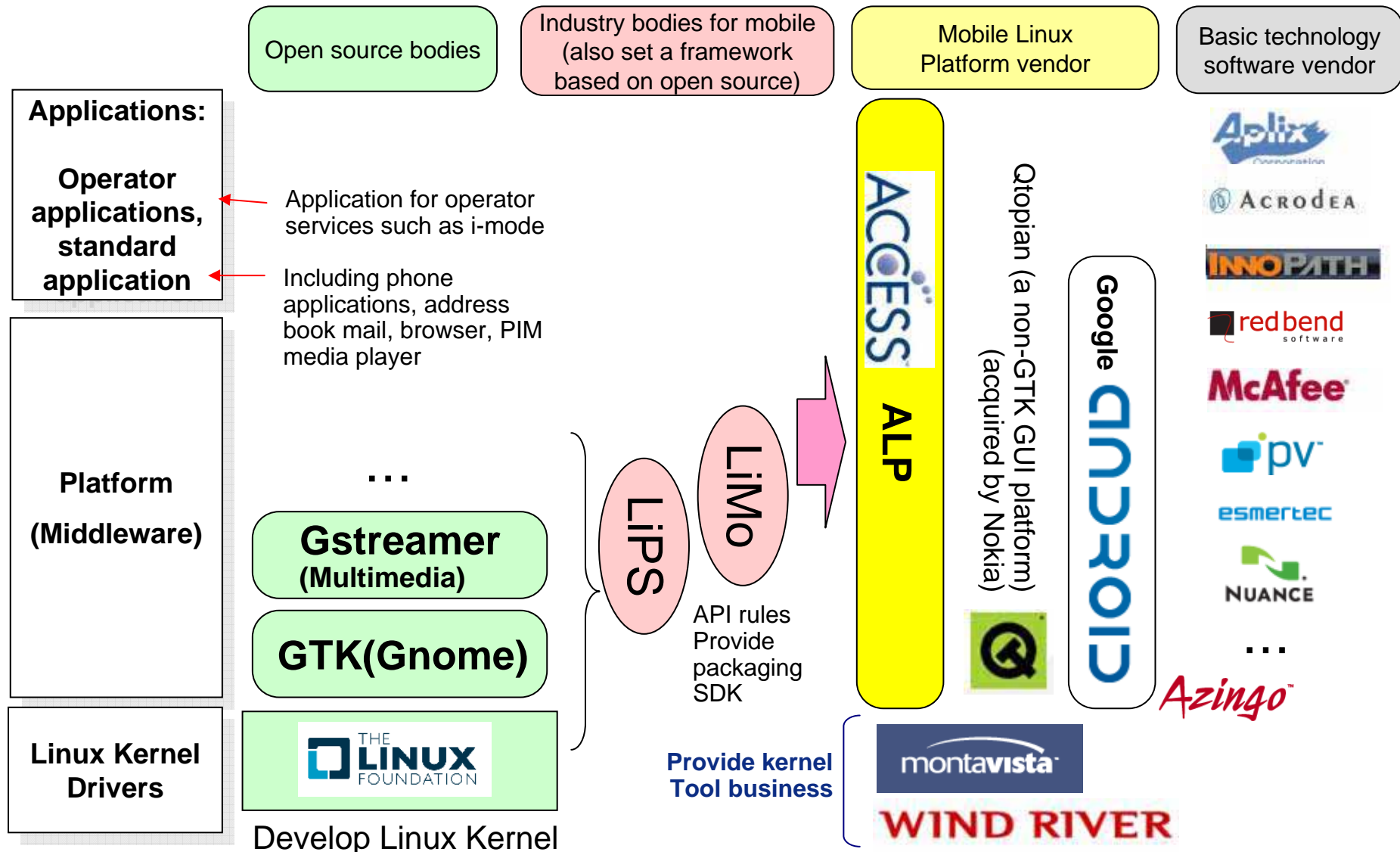
Paul Forostowsky, CEO Bluestreak



"As a long-time embedded GNU/Linux developer using traditional cross-compiling tools and other development tools like Maemo, Open Embedded, Scratchbox, MobLin, etc., **ACCESS Linux Platform is the best of these environments I've used**. I often have to drop back to building all my own toolchains to get everything to work correctly; with ACCESS Linux Platform I haven't had to do so -- it's just worked."

Rob Savoye, Open Media Now! Foundation

# Mobile Linux related Industry Map



# Comparison of ALP with Android

## ○ Characteristics of Android

- While Linux kernel is used, other middleware is Google specific (ALP employs major open source such as GTK, Gstreamer, BlueZ)
- Applications developed using Java (Google unique Java VM-Dalvik)
- Likely compatible with various chips
- Present existing operator applications are written in C/C++; therefore, transplanting to the Android environment is quite difficult (basically have to recreate).
- Strong compatibility with Internet services.

## ○ Android is a platform to expand Google services

## ○ ALP supports operators' main services, provides an open application environment, and is used to develop various services and uses.

- If Android were completely open source and free, Android applications may be incorporated by including Dalvik VM in ALP as was done with Garnet VM.



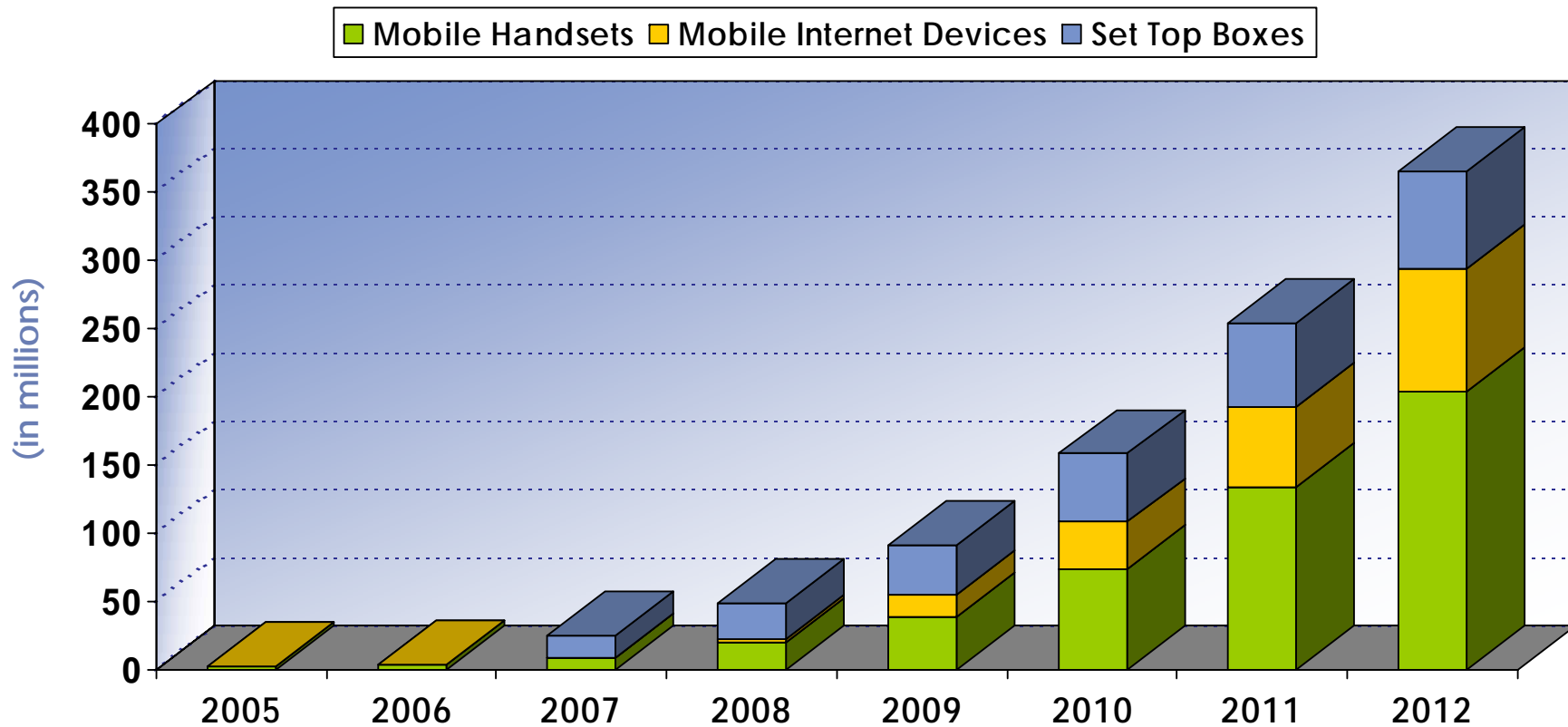
(\*The above picture is cited from Android website.)

# Comparison of ALP with Symbian OS



- Concerns about Symbian OS
  - Compatibility with CPUs other than ARM ones (Qualcomm, Intel, etc.)
  - Nokia control (47.9% share), flexibility, degree of vendor freedom
  - Roadmap to future high-performance (such as multi-core)
  - High R&D expenses (perhaps around 20.0-25.0 billion yen)
  - Operator pack support
  - Symbian only covers mobile handsets – Linux covers more broad area (scalable)
  
- On the other hand, ALP has efficient development
  - Use of mature open-source (Linux, GTK, Gstreamer, BlueZ, etc.)
  - Accelerated technological evolution through cooperation with community
    - Development of various drivers, tool development, de-bugging, improve functions, various CPU support
  - Efficient development through shared demands from many customers
  - Many of ACCESS's application assets are integrated with ALP

# Annual Shipments of Linux Devices Expected to Grow to 300-400 Million by 2010



Sources: ABI Research, ACCESS internal analysis

# ACCESS's Future Strategy



- Only ACCESS can fulfill the following requirements at a time when the structure of the mobile handset market is changing
  - Independent software company that possesses the technological experience and strength to handle software platform with over 10 million lines
  - Global development and support system
  - Abundant experience with transplanting and customizing products for various devices
  - Strong cooperative and reliable relationship with operators
  - Can promote 3rd party community
- Develop ALP by supporting operators
- Support increased development efficiency by manufacturers
- Propose and develop various network devices



## Open Platform and Open Internet

are keys to the future  
of mobile phones and convergence!



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