

GRUPPO TELECOM ITALIA

**Internal Presentation**  
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# **Pictures of Tomorrow**

Innovative Digital Imaging Applications and  
Services (Mobile and Web)

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## **Mobile Imaging Applications**

- ▶ Platforms (Mobile Operation System)
- ▶ Current Mobile Applications : Phanfare, OVI, Kodak
- ▶ Innovative Applications : Nokia Point and Find
- ▶ Case Study : Pixsense

## Platforms : Mobile Operation Systems

**symbian**

**BlackBerry™**



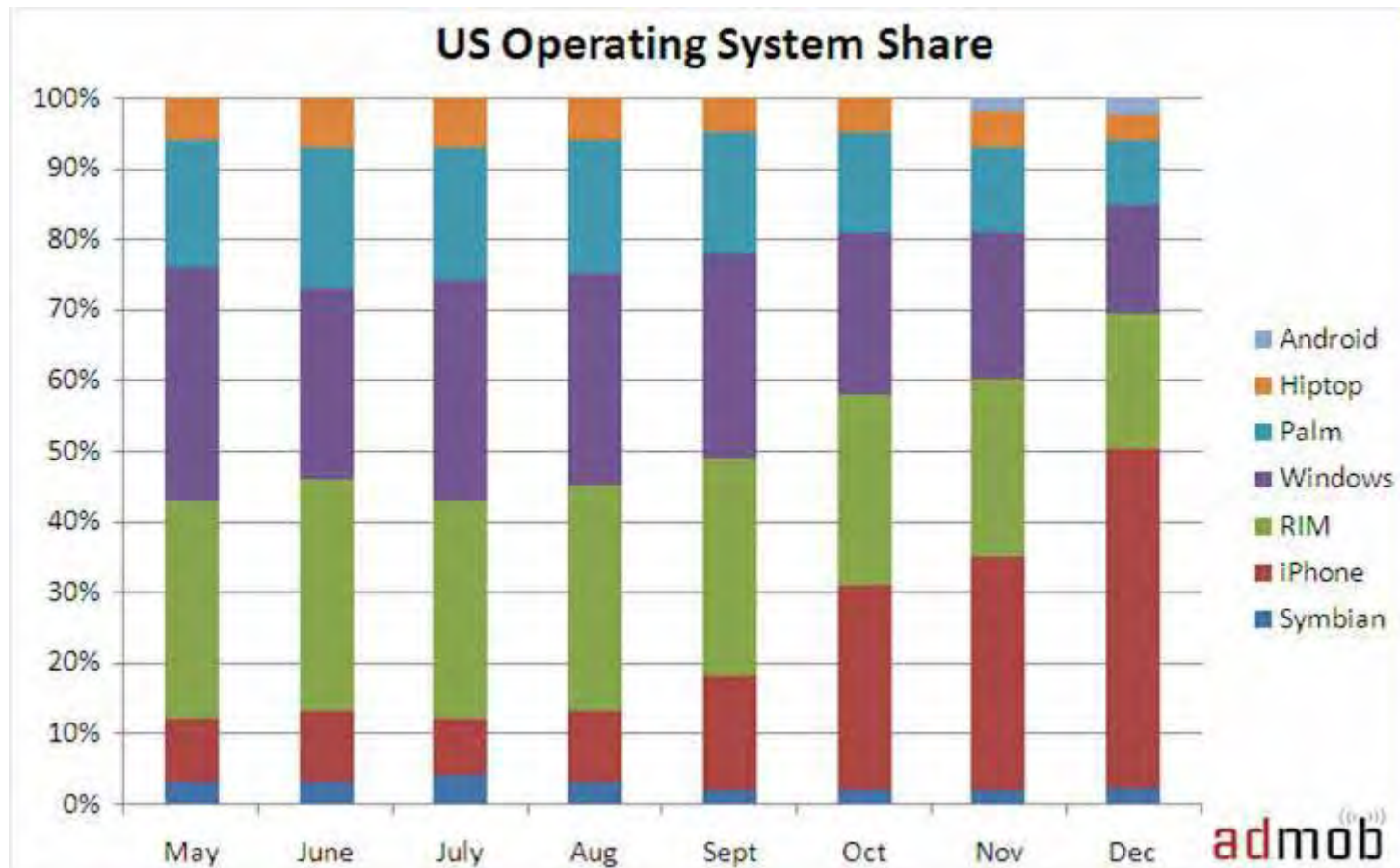
# Mobile OS



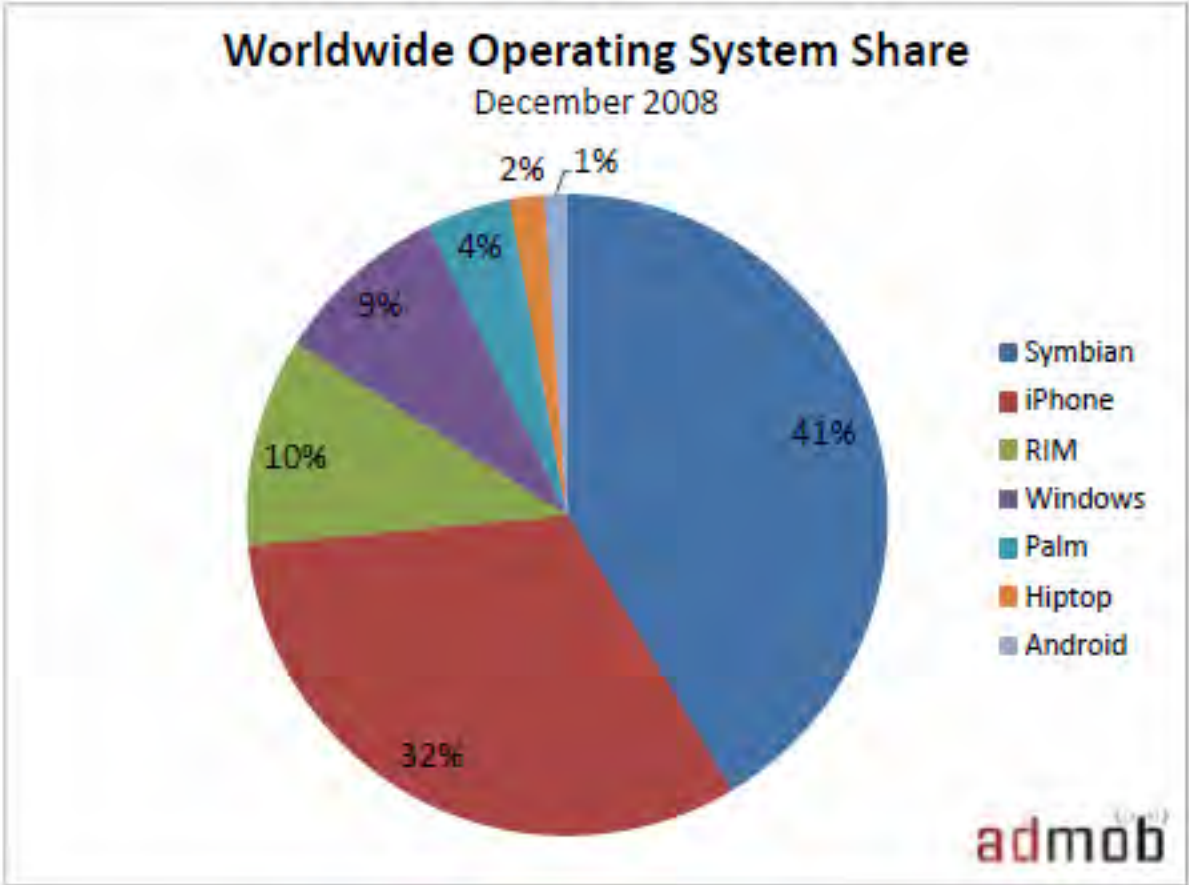
# Mobile OS



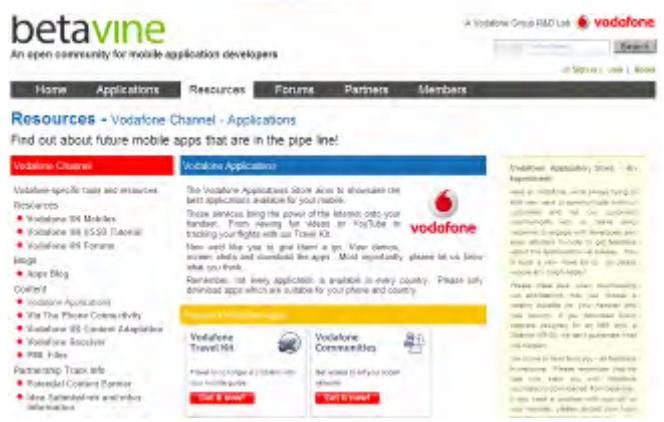
## Market Share : Mobile OS



# Market Share : Mobile OS



# Quick Overview of App Store (market)



## Ovi Store Coming Soon

- » Applications, games, videos, tones, graphics and more
- » Personalized content for who and where you are
- » Check out recommendations from your friends

Three Nokia smartphones are shown, each displaying the Ovi Store interface. The phones are arranged in a fan-like pattern, showing different views of the store's content, including application tiles and personalized recommendations.

# Mobile Application Stores

	App Store	BREW	Download!	Handango	GetJar
<b>Fundamentals</b>					
Owner	Apple	Qualcomm	Nokia	Handango	GetJar Networks
Distribution model	via iTunes on iPhone and iPod Touch only	via operators on BREW devices only	on S60 devices only	direct and via operator, OEMs and retailers	direct and via operators
Platforms	OSX	BREW	S60	Java, Symbian, RIM WinMo, Palm, Android	Java, Symbian, FL, RIM WinMo, Palm, Android
Installed base of on-device storefront (2008 est.)	12M	500M	200M	N/A	0
<b>Key figures</b>					
Downloads per month as of end of 2008 (est.)	65M <sup>(1)</sup>	80M on average in 2007	3M <sup>(2)</sup>	3M <sup>(2)</sup>	17M <sup>(3)</sup>
Applications to end of 2008 (est.)	10,000	12,000M	10,000 (S60) 50,000 (Java) <sup>(4)</sup>	140,000 <sup>(4)</sup>	10,000
Revenues (2008 est.)	\$500M/year <sup>(1)</sup>	\$1B total for developers (March 07)	N/A	N/A	N/A
Revenue model	70% to developer	commission varies	varies	60-70% to developer + rev share to channel	ad-based apps + website promos
<b>Features</b>					
Global marketplace targeting, cert, submission, pricing	✓	✓ (CDMA markets)	partial (case-by-case submission)	✓	partial (targeting only)
Centralised Billing and settlement	✓ (one-shot)	✓ (via operator)	partial (via premium SMS only)	✓ (credit card, in some cases operator billing)	✓ (free or ad-funded apps CC billing coming in 4Q08)
Distribution across MNOs, OEMs and off-deck	✓ (OEM-only)	✓ (via operator)	partial (not available in all regions)	✓ (off-deck and via some OEMs/operators)	✓ (off-deck and via some OEMs/operators)
Provisioning, licensing and software management	✓	✓	partial (no silent install)	partial (mostly licensing)	-
On-device discovery catalogue managment & marketing	✓	✓	✓ (shop-in-shop)	✓ (where InHand installed)	partial (via bookmarking app)

(1) Based on publicly reported figures of application downloads and revenues

(2) Based on approximate cumulative figures and a linear growth model

(3) November 2008, stated to be increasing by 1M per month

(4) Handango's total application count includes variants. Nokia applications refer to total # of applications for S60

source: VisionMobile research

## General Features of Digital Image Application



- **How ?** How fast. How many. How easy. How effective. How simple...

## General Features of Digital Image Application



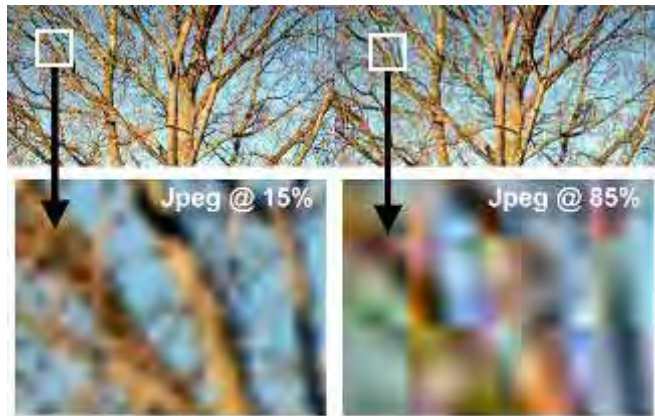
- Synchronize your pictures and videos to Flickr, Facebook, Youtube, and more

## Technology/Society: D.P. Enablers

- Average to good quality embedded digital cameras
- High resolution full color displays
- High speed data transfer (UMTS, HSDPA) for 3G mobile networks
- Highly efficient compression methods
- Constantly increasing storage, power, and resolution
- New “User and developer” friendly operating systems:
  - applications, applications, applications!
- GPS and geotag features
- Increased popularity of flat rate mobile plans
- First photo gallery web services with mobile access
- Social digital pictures:
  - Shoot whenever, wherever, whatever you want (always in your pocket)
  - The YouTube effect (I’m online, too)
  - Facebook, social networks : you can’t miss them

# Technology

## ➤ Image Compression



## ➤ Face detection



## ➤ Geo Location, Geo Tag





# **Digital Pictures Applications for Mobile Devices**

- ▶ Phanfare
- ▶ Kodak Gallery
- ▶ Nokia Ovi
- ▶ Comparison



## Phanfare : Upload, Share, Preserve

- Upload your pictures (iphone or Web)
- Synchrononize your pictures wirelessly (in background) to Phanphare server.
- Use your favorite image software : Picasa, Lightroom, iPhoto, Aperture
- Storage : 250MB Free Space to upload, (Premium users are unlimited 54.95\$)
- Phanphare Screensaver, Slideshow, Printing Service: Photobook, Cards, DVDs.
- UPnP-enabled device (Xbox360, PS3) , Facebook upload, e-mail Sharing



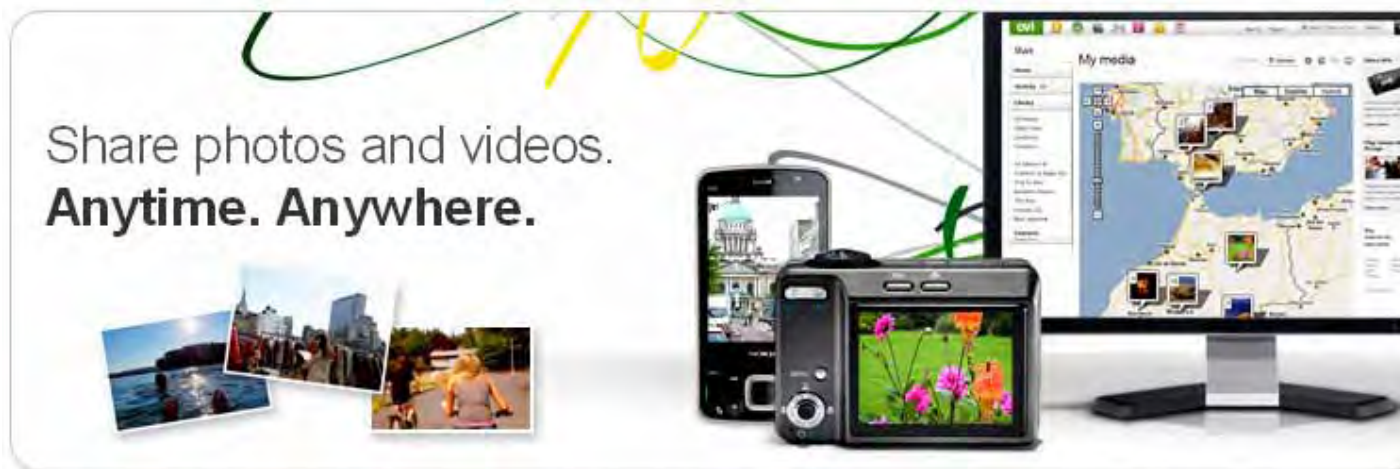
## Kodak Gallery

- **Online Photo Gallery Service**
- **Kodak Easy Share Software**
- **Upload video to Youtube**
- **Unlimited Space**
- **Printing Service (International Delivery)**
- **20 free prints for New Member**

**Kodak** EasyShare  
Software



## Nokia Ovi : Your life. Connected.



## Other Applications



## Comparison of Application and Function

	Upload from Mobile	Sync	Social NW	Printing Service	Unlimited Storage
<b>Phanfare</b>	✓ iPhone Client	✓	✓	x	\$54.95/year
<b>Kodak Gallery</b>	✓ Email \$24.99/year	x	x	✓ 0,1\$/each	✓
<b>Shutterfly</b>	x	x	x	✓ 0,1\$/each	✓
<b>Nokia OVI</b>	✓	✓	✓	x	✓
<b>Pixsense</b>	✓	✓	✓	x	✓
<b>Photobucket</b>	✓ Email	x	x	x	x
<b>Snapfish</b>	✓ Email	x	x	✓ 0,1\$/each	✓

## Innovative Applications

- **Image technology is not only to identify the content of images, but also to **engage related information** by photos.**
  - **People can use their internet enabled devices based interactions applications and get embedded convenient access with unique experience.**
- ▶ **Image Search**
    - ▶ Google - Similar Images
  - ▶ **Image Recognition**
    - ▶ Nokia - Point & Find
  - ▶ **Image Compression and Share**
    - ▶ PixSense

## Image Search - Google Similar Images

- ▶ Search "Paris" on Google Similar Images
- <http://similar-images.googlelabs.com>

- ▶ Google is looking at the visual characteristics of popular images and then determining rank based on similarities between images.



### Refine your image search with visual similarity

Similar Images allows you to search for images using pictures rather than words. Click the "[Similar images](#)" link under an image to find other images that look like it. Try a search of your own or click on an example below.

### paris



[Similar images](#)



[Similar images](#)



[Similar images](#)



[Similar images](#)

## Google Similar Images

- ▶ Users do not have to input lots of **keywords** to describe what they are finding. Furthermore, users can narrow down their searching subjects by size, color or content.



- ▶ Google makes **content** to be more **visible** and can put practical use to video and audio content.

## Image Recognition - Nokia Point & Find

- ▶ Point & Find uses a variety of the device's capabilities including camera, Internet connection and GPS to evaluate objects. Users just take a picture at a real-life object and then retrieve information about that object from Internet.
- ▶ The value of image recognition technology is not only to identify the content of images, but also to engage related information at the point by taking photos.





# PixSense

- ▶ Market positioning
- ▶ Features
- ▶ Procedure : from shooting to uploading

## Market positioning

- ▶ Telecom operators confront increased competition from price of connecting rate and devices .Therefore, **Service Quality** and **User Experience** issues will be the fundamental differentiating factors in this transition, especially emphasis on achieving maximum bandwidth efficiency. **Compress technology** can be the driving force to enhance users' frequency of using mobile phone.
- ▶ **Service Quality**
  - ▶ Accelerate transferring speed by saving bandwidth
  - ▶ Decrease hardware maintenance cost
  - ▶ Improve server capacity and let much more users uploading or exchanging much more content.
- ▶ **User Experience**
  - ▶ Use an easy image compression application to save time and money on transferring.
  - ▶ Sharing photos with friends immediately with mobile client.
  - ▶ 1 click and publish photos to other websites (Facebook, YouTube, Flickr ...)

## Features

- ▶ **Compression needs is being driven by the growth of bandwidth-hungry which is caused by high-pixel and numerous image files. Customers are seeking solutions that can be easily adapted to meet the needs of mobile content delivery requirements. In order to bridge the performance gap that currently exists in the mobile streaming market, PixSense provides a JPEG compression application.**
  - ▶ **Highly efficient compression algorithm for digital pictures, which allows users and operators to save about 50% bandwidth for content mobile upload.**
  - ▶ **The quality of compressed images is good enough to print out.**
  - ▶ **Uploading photos from internet connected devices to 3rd social communities with 1-click.**
  - ▶ **Enables users to share images from an internet enabled device (clients available for many cellphones)**

## Procedure : from shooting to uploading



# Share

## ► By SMS



Home | Help | Contact Us

Shared Media

You are at the first media    You are at the last media

View as Slideshow  
Add to Your Friends Collections  
Sign up for PixSense 2.9

Info  
★★★★★ (0)  
Number of Views: 3

Tags

More Information (EXIF)  
Taken with: Nokia. N95 8GB.  
More Info

05052009122

Comments

## ► By Mail

piersantelli has invited you to view my media.  
Hi rahon5110@y...  
Check out my new media.

[Click here to view the media](#) - The PixSense team.



# Image Compress

▶ Before



▶ After



40% off