

**Proposta de PFC: aplicació d'agents en telèfons mòbils en l'àmbit turístic**

**Número de persones:** 1-2

**Estudis:** ETIS, ETIG, EI

El PFC consisteix en integrar i millorar la feina feta en diversos PFCs anteriors, referents a l'àmbit del turisme. Els treballs previs que haurieu de consultar són els PFCs (<http://www.etsi.urv.es/recerca/banzai/toni/MAS/PFCs.html>) d'Alex Viejo (el de 2n cicle), Montse Batet i Marc Redondo. El primer ja va implementar l'agent personal en un telèfon mòbil (un Nokia n-gage, amb algunes limitacions); la segona va implementar un sistema recomanador personalitzat (que es pot millorar en alguns aspectes); el tercer va construir un planificador de rutes turístiques dins de la ciutat.

Les **tasques bàsiques a realitzar** en el PFC serien aquestes:

- Estudiar aquests 3 PFCs.
- Estudiar les capacitats dels nostres telèfons actuals, que són Nokia 6680 (veure annex). Tenim mòdul GPS que pot anar amb el mòbil.
- Veure quines millores es poden fer en cadascun dels PFCs anteriors, en alguns casos aprofitant les característiques dels mòbils.
- Integrar els 3 sistemes en 1 de sol, fent les millores adequades.

Algunes millores podrien ser:

- Aprofitar millorar les capacitats gràfiques.
- Intentar explotar l'ús de fotos/videos.
- Usar la possibilitat del GPS per donar informació/serveis depenents de la localització del turista.
- Millorar les tècniques de recomanació del PFC de Montse.
- Millorar les tècniques de planificació del PFC de Marc.
- Mostrar els resultats de la planificació de Marc en el mòbil.
- Pensar si es pot aprofitar la possibilitat de Bluetooth per comunicació a curta distància, mantenint el GPRS (o inclús UMTS) com comunicació a llarga distància.

Hi ha moltes possibilitats. Una de les vostres primeres feines seria precisament dissenyar el SMA que volguessiu construir en el PFC, pensant totes les opcions que se li podrien donar a un turista a través del mòbil i aprofitant les funcionalitats del Nokia 6680.

## Phone Models

Europe, Middle East,  
Africa



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# Nokia 6680 Imaging Smartphone Features

## What's New

The Nokia 6680 is an imaging smartphone that's as sophisticated and successful as you are. With two integrated digital cameras (1.3 megapixels in the back, VGA in the front), you can conduct face-to-face video calls from your phone.

The Nokia 6680 imaging smartphone also has video sharing capability, so you can share and view video clips in the middle of a call. Send and receive emails and view attached files on the high-resolution, 262,144-color display. All you have to do is pick it up, insert your SIM, and turn it on - the rest is already inside.

## See How It Works



Explore the features of the Nokia 6680 imaging smartphone with [interactive demonstrations >>](#) \*\*  
(Opens in a new window, requires [Macromedia Flash Player](#).)

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## Key Features

- Two integrated digital cameras: 1.3 megapixel and VGA
- Experience two-way video calls and see face-to-face as you talk in real time
- Video sharing capability
- High-resolution, 262,144-color display
- Capture quality images and video
- Nokia XpressPrint printing solution: PictBridge, Bluetooth wireless technology, MultiMediaCard (MMC)

## Shopper Assistance

- [Compare Phones](#)
- [Store Locator](#)

## Nokia Imaging



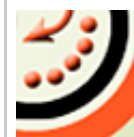
There's more than meets the eye - [see the possibilities >>](#)

## Nokia Lifeblog



Your Automatic Multimedia Diary. [Try it now >>](#)

## muveeStyles



Your video. Your message. Your muvee. [Read more >>](#)

- Fast WCDMA and EDGE connections for broadband-speed browsing plus tri-band GSM phone with global roaming capability
  - Convenient email access with automatic download to send images and view documents
  - Calendar, contacts, and other personal information management features plus data printing
  - Music player with stereo audio
- 

## Full Specifications

### Operating Frequency

- Dual mode WCDMA/GSM operation and tri-band GSM coverage on up to five continents (GSM 900/1800/1900 and WCDMA 2100 networks)
- Automatic switching between bands and modes

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### Size

- Weight: 133 g
- Dimensions: 108.4 x 55.2 x 20.5 mm; 104 cc

### Display and User Interface

- Active matrix, 262,144-color display (176 x 208 pixels)
- Automatic brightness control for display
- Five-way scroll key, two soft keys, application key, edit and clear keys, send and end keys
- Dedicated keys for voice dialing, commands, and Push to talk (PoC)
- Active standby screen

### Imaging

- Two-way video call capability
- Video sharing for one-way live video or video clip sharing within the voice call
- Back side camera: integrated 1.3 megapixel camera sensor (1.23 megapixel effective resolution, 1280 x 960 pixels) with 6x digital zoom and slide for camera protection, activation, and control
- Integrated flash (operating range up to 1.5 m)
- Flash modes: on, off, automatic
- Advanced camera modes: still, sequence, and video
- Settings for night, brightness adjustment, image quality, self-timer, white balance settings, and color tones
- Front side camera: integrated VGA camera (640x480 pixels) with 2x digital zoom
- Video and still image editors
- Movie Director for automated video production
- Nokia Image Manager
- Image and video clip uploading to the Web

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### Nokia XpressPrint Printing Solution

- Print digital photos directly from your imaging smartphone:
  - Transfer photos directly to compatible printer or kiosk via Bluetooth wireless technology, MultiMediaCard (MMC), or to PictBridge-compliant printer via USB cable
  - Built-in application is quick and easy to use; no installation, no fuss
- Find out more at [www.nokia.com/xpressprint](http://www.nokia.com/xpressprint)

### RealPlayer Media Player

- Download and play multimedia files (video and music)
- Stream media files from compatible media portals

- Full-screen video playback on the phone to view downloaded, streamed, or recorded video clips in larger size
- Played formats (decoding): .3gp and .mp4 file formats, MPEG-4 video, H.263 video and AMR audio, RealMedia (Real Video and Real Audio), MP3, and AAC

### Memory Functions

- 10 MB internal dynamic memory for contacts, text messages, multimedia messages, ringing tones, images, video clips, calendar notes, to-do list, and applications
- Expandable memory: 64 MB Reduced Size Dual Voltage (1.8/3V) MultiMediaCard (MMC)\*
- Hot swap slot for easy MMC card insertion and removal

**Note:** The inbuilt MultiMediaCard (MMC) reader in the Nokia 6680 imaging smartphone functions on 1.8 Volt and therefore requires a dual voltage MMC which can support both 1.8V and 3.0V. Nokia branded reduced size MultiMediaCards (MMC) are dual voltage cards (sold separately).

\*Please note that the memory capacity of the MultiMediaCard (MMC) in the sales package may vary depending on the market and/or your network operator/ service provider.

### Messaging

- Convenient email client with attachment support (view jpeg, 3gp, MP3, .ppt, .doc, excel, and .pdf files) and periodic polling functionality
- Compatible with Nokia Wireless Keyboard (sold separately)
- Multimedia messaging: combine image, video, text, and audio clip and send as MMS to a compatible phone or PC; use MMS to tell your story with a multi-slide presentation
- Automatic resizing of your megapixel images to fit MMS (max. 300 KB attachment size depending on the network)
- Text messaging: supports concatenated SMS, picture messaging, SMS distribution list
- Predictive text input: support for all major languages in Europe and Asia-Pacific
- Instant Messaging

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### Connectivity

- Integrated Bluetooth wireless technology v.1.2
- USB 2.0 full speed via Pop-Port™ interface
- Nokia PC Suite connectivity with USB and Bluetooth wireless technology
- Local synchronization of contacts and calendar to a compatible PC using compatible connection
- Remote over-the-air synchronization
- Send and receive images, video clips, graphics, and business cards via Bluetooth wireless technology
- Profiles with Bluetooth connectivity: Basic Printing Profile (BPP) using Image Print or Info Print applications, Human Interface Device Profile (HID) using Nokia Wireless Keyboard application

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### Browsing

- WAP 2.0 XHTML/HTML multimode browser
- Improved Web compatibility with support for HTML 4.01, including support for elements such as image maps, background images, and frames
- Support for a subset of JavaScript 1.5, which includes the most commonly used functions found on the Internet

- File upload over HTTP using standard HTML forms
- Small screen rendering option including a faster page-up/page-down scrolling style
- Full-screen mode, download progress bar, and adaptive history list
- 3GPP video streaming
- OMA DRM 1.0 - including forward lock for content protection, combined delivery, separate delivery and superdistribution
- Wallet: convenient online use and storage of your numbers and passwords
- Offline mode for using imaging and productivity features in areas where the radio must be switched off

#### **Data Transfer**

- WCDMA 2100 with simultaneous voice and packet data (PS max speed UL/DL= 128/384kbps, CS max speed 64kbps)
- [EDGE](#): Mobile broadband access with upload up to 118.4 kbps and download up to 236.8 kbps  
Note: Actual achieved speeds may vary depending on network support
- GPRS, class B, multislots class 10
- Speech codecs: FR, EFR, WCDMA, and GSM AMR
- Transfer data from one Series 60 phone to another

#### **Call Management**

- Push to talk (PoC) with dedicated key
- Contacts: advanced contacts database with support for multiple phone and email details per entry, also supports thumbnail pictures and groups
- Speed dialing
- Logs: keeps lists of your dialed, received, and missed calls
- Automatic redial
- Automatic answer (works with compatible headset or car kit only)
- Supports Fixed Dialing Number, which allows calls only to predefined numbers
- Conference call

#### **Java™ Applications**

- Java™ MIDP 2.0, CLDC 1.1 (Connected Limited Device Configuration (J2ME))
- Over-the-air download of Java™-based applications and games

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#### **Other Applications**

- On the MultiMediaCard (MMC):
  - Adobe Reader
  - Games: Card Deck, Snake EX
  - Info Print
  - Kodak Mobile
  - Nokia Lifeblog mobile application
  - Nokia Wireless Keyboard application
  - Photo Editor
  - Push to talk (PoC) application
  - Quickoffice document viewers (Quickword, Quickpoint, Quicksheet)
  - Settings Wizard tools for easy email, video sharing, and Push to talk (PoC) configuration
  - User Interface (UI) themes
  - Video sharing application
- On the CD-ROM:
  - Adobe Photoshop Album Starter Edition 2.0
  - Nokia Lifeblog PC application

#### **Personal Information Management (PIM)**

- Advanced Series 60 PIM features including calendar, contacts, to-

do list, and PIM printing

**Voice Features**

- Voice dialing
- Voice commands
- Voice recorder
- Integrated handsfree speaker

**Digital Services**

- Java™ and Symbian applications available from [Nokia Software Market](#)
- Graphics, icons, animations, logos
- Games: Possibility to download new games
- Ringing tones: True Tones, polyphonic tones
- Themes: Possibility to download new themes

**Sales Package Contents**

- Nokia 6680 imaging smartphone
- 64MB MultiMediaCard (MMC) MU-1\*
- Adapter for normal size MMC slots
- Nokia Stereo Headset HDS-3 (HS-3 in APAC)
- Nokia Battery BL-5C
- Nokia Travel Charger ACP-12
- Nokia Connectivity Cable (USB) DKU-2
- CD-ROM containing software
- User guide, Quick Start guide, and Add-on Application guide

\* Please note different MultiMediaCard (MMC) configurations may be available depending on country or operator configuration

**Power Management**

Battery	Talk time*	Standby time	Charging
Battery 900mAh BL-5C	Up to 2.2-3.3 hours (WCDMA) Up to 3-6 hours (GSM)	Up to 6-11 days	ACP-12/LCH-12: 1h 15min

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[Eco Declaration >>](#)

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\* Depends on the operator network configuration and radio access technology used.

\*\* Please note that these interactive demonstrations do not replace the user guide for this product. Always read the entire user guide for important safety information that may not be included in these demonstrations.

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