



## **Integrated Project on Pervasive Gaming**

**FP6 - 004457**

*WorkPackage 7: Tools and Interface Technology*

### **Deliverable 7.3: Toolbox with Prototypes of the first Basic Tools Public Version**

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## **EXECUTIVE SUMMARY**

The first toolbox with basic tools contains components from the following areas:

- a) Logfile Analysis and Evaluation Tool (responsible partner: Fraunhofer FIT)
- b) Content Authoring and Management for Spatial Representations (responsible partner: University Nottingham)
- c) Content Delivery Services (responsible partner: SNS)
- d) Polling Extension to BSCW (responsible partner: Fraunhofer FIT)
- e) Cell ID Logging and Visualisation Component: (responsible partner: University Nottingham)



## Deliverable Identification Sheet

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## 1 INTRODUCTION

The first toolbox with basic tools contains components from the following areas:

- a) Logfile Analysis and Evaluation Tool (responsible partner: Fraunhofer FIT)
- b) Content Authoring and Management for Spatial Representations (responsible partner: University Nottingham)
- c) Content Delivery Services (responsible partner: SNS)
- d) Polling Extension to BSCW (responsible partner: Fraunhofer FIT)
- e) Cell ID Logging and Visualisation Component: (responsible partner: University Nottingham)
  - The components are independent from each and can be used (installed) individually.

The following section gives a short survey for each component, based on information given in the documentation for the respective component.

People who are not partners of the IPerG project and therefore have no access to internal IPerG documents and software should contact the contact person given for the respective component if they are interested in obtaining a component. Please note that almost all components are still under further development.

## 2 COMPONENTS OF THE TOOLKIT

### 2.1 Logfile Analysis and Evaluation Tool

Contact person: Wolfgang Appelt (Fraunhofer FIT)

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The logfile analysis tool can be used to analyse logfiles which contain event entries in a given format. The format has been chosen rather generically so it should be applicable to a broad range of event logfiles. The tool consists of two components:

- The *latpre* processor for either
  - merging two or more logfiles into a single logfile, or
  - for transforming a logfile into a standardized format designed for high performance also for large logfiles (several hundred thousand events).
- The *lat* processor for performing various analysis operations on a logfile in this standardized format.

The technical requirements for installing the tool are:

- A C compiler
- An installation of the CWEB system of Donald Knuth (software is written in CWEB)

The distribution contains the following files:

- README.txt: Installation and usage instructions.
- cweb.exe: A Windows (95/98/NT/2000/XP) executable which installs the CWEB system which is required for installing *latpre* and *lat* (see below).
- cweb.tar.gz: A gnuzip'ed tar file containing the complete sources and documentation for installing CWEB. This file is required for installing CWEB on non-Windows systems.
- *latpre.w*: The source code of the *latpre* program, written in CWEB.
- *lat.w*: The source code of the *lat* program, written in CWEB.
- *lat-common-code.w*, *lat-conceptual-model.w*, *lat-config.w*: Common code used by *latpre.w* and *lat.w*.
- *latpre.pdf*, *lat.pdf*: Pdf files with the documentation of the *latpre* and *lat* program.

## 2.2 Content Authoring and Management for Spatial Representations

Contact person: Leif Oppermann (University Nottingham)

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The “Content Authoring and Management for Spatial Representations”-Tool Package allows to graphically author regions and transitions between regions based on real world data. These definitions can then be used to trigger events that drive a location based game.

The package consists of a set of general tools which pre-process available or specifically collected input data to support the authoring process in the graphical tool. The input data would mainly be maps and spatial sensor data, which means geo-coded and/or time-stamped snapshots of network data like GSM Cell ID or Wifi BSSIDs.

The authoring process builds on overlaying the sensor-data on meaningful backgrounds that facilitate the orientation of the game designer. For geo-coded data this would be a map of the area, for time-stamped data this might be a timeline, an adjacency graph or any kind of statistical representation. The current authoring prototype only uses geo-coded data on maps but the other views are currently being researched.

The designer can choose his view on the data (e.g. set the map to look at) and define regions in a graphical way by selecting locations (one or more locations make a region) with the mouse. Regions can be named, saved and modified.

The output-format is one text-file per region, listing all contained location IDs. These files can then be post-processed to cater for application specific needs.

The component contains three zip files:

- A zip file containing a MS Word file with the complete documentation of the tool and a PowerPoint file given a survey of the component.
- A zip file containing the source code of the component with about 100 files.
- A zip file with the binary version of the component with about 30 files.

Note: The Cell ID Visualisation Tool is going to be merged with the authoring tool at a later stage.

## 2.3 Content Delivery Services

Contact person: Sabiha Ghellal (SNS)

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The tool provides three individual services (i.e., each of these services can be used as a stand-alone service):

- a) Services for streaming audio over the Internet. This includes in particular the icecast software. Icecast is a streaming media server which currently supports Ogg orbis and MP3 audio streams. It can be used to create an Internet radio station or a privately running jukebox and many things in between.
- b) Services for providing instant text messaging between PCs and Java Phones based on the Jabber software.
- c) Services for delivering pictures from particular Sony cameras over the Internet. The software itself is not contained in this tool but only its documentation.

The component contains three zip files:

- A zip file containing the set-up file for the icecast software and installation and usage instructions for icecast (ca. 20 files).
- A zip file containing the software for installing the Jabber based mobile text messaging software software and installation and usage instructions (over 200 files).
- A zip file containing installation and usage instructions for the Sony network camera SNC RC30N and SNC RZ25 respectively (ca. 10 files).

**Note:** This software has not been developed within the IPerG project itself, but it has been selected from existing public domain or private software and successfully tested and used in the Crossmedia showcase. Since it was considered to be useful also for other showcases, it has been added to the toolbox.

## 2.4 Polling Extension to BSCW

Contact person: Wolfgang Appelt (Fraunhofer FIT)

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The component itself is delivered as an extension to IPerG's BSCW server where it can be used by all showcases.

The BSCW User Manual describes the functionality of the polling feature.

BSCW polls consist of a number of questions, each offering a list of answers selected from several types of answers. A poll can be open for voting either only to the member group of a workspace in which it was created or to the general public. There are a number of configuration options for polls, e.g., voting may be limited to a particular voting period for the poll. The tool can be used for

- creating and editing polls as particular BSCW objects,
- starting (and restarting of) polls,
- viewing and exporting poll results.

Poll results may be viewed in graphical form during and after the voting period; voting results may also be exported for further processing.

## 2.5 Cell ID Logging and Visualisation Component

Contact person: Leif Oppermann (University Nottingham)

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Mobile phones in a GSM network need to be connected to a cell tower at all times in order to function. Each cell tower is the base-station for one or more *cells*, each of which can be uniquely identified worldwide by a set of numbers commonly referred to as Cell ID. A mobile phone constantly observes its surrounding cells and automatically connects to the strongest cell if the signal of the currently used cell drops below a certain threshold value.

This first tool of this release reads out the Cell ID of a mobile phone continuously (e.g., each ten seconds) and logs it on the phone. The logfile can be transmitted to a FTP server. The tool is currently limited to Symbian phones like Series 60 or better, e.g. a Nokia 6600, but Windows Smartphones are known to be suitable for this task as well.

The second tool is provided which allows a graphical evaluation of such GSM logfile data.

The file CIDVT.zip contains the following files:

- Working with Cell ID.doc: This MS Word file describes background, functionality and usage of the tool.
- The file DoF\_Cell ID Logging.zip contains the source code (written in Python) of the tool and installation instructions.
- DoF\_VisualisationToolandData.zip: This zip archive (over 300 files) contains the software (written in Java) which allows a graphical evaluation of GSM logfile data. It also contains installation and usage instructions.