FP7-ICT-2009-4 (248421)
SeC
Sim-e-Child
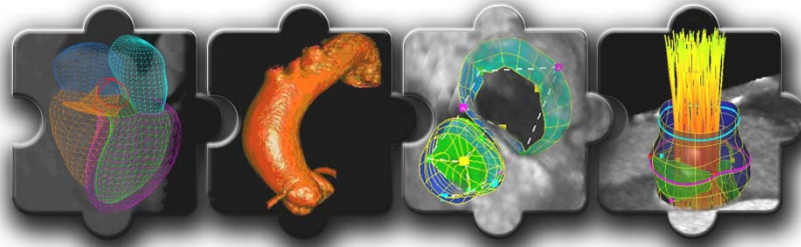
Collaboration Project

Thematic Priority: ICT

Deliverable 4.2
Simulation and Collaboration Platform Interim Release and Report

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Sim-e-Child Consortium
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01. Siemens AG (Siemens)
02. Lynkeus Srl (Lynkeus)
03. Maat France (MAAT)
04. Technische Universität München (TUM)
05. I.R.C.C.S. Ospedale Pediatrico Bambino Gesù (OPBG)
06. Siemens Corporate Research, Inc. (SCR)
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Table of Contents

Bibliography

[1]	gLite Grid middleware website - http://www.glite.org/
[2]	EGI website - http://www.egi.eu
[3]	Wang F, Bourgué PE, Hackenberg G, et al: "SciPort: An Adaptable Scientific Data Integration Platform for Collaborative Scientific Research". Proc. VLDB, 1310-1313. 2007
[4]	The Liferay portal web site - http://www.liferay.com/
[5]	The JASIG CAS web site - http://www.jasig.org/cas

1.   **Introduction**

1.1. **Purpose**

This document provides the information related to the current Sim -e-Child (SeC) Platform at Month 20. The nature of this deliverable is "prototype": it will therefore only contain the information about the software version available in the system.

To get access concretely to the system, the full procedure is provided in the main web site: http://sec-portal.maatg.fr. If you cannot get access to a proper electronic identity (certificate), please send an email to the project coordinator and we will provide you with a test access (it could take some time in order to request a "training" certificate).

1.2. **Overview of the document structure**

This document is mainly composed of two parts. The first part will quickly present the SeC platform architecture. Then, a detailed description of the current installed version of each component will be provided.

1.3. **Abbreviations**

| HeC	Health-e-Child
SeC	Sim-e-Child
SOA	Service Oriented Architecture
SSO	Single Sign On

2. The SeC Platform

2.1. Introduction

The SeC platform is an evolution of the former Health-e-Child Gateway grid software. The main difference between the actual version and the one that was provided in HeC is the way of accessing it. Previously, the users were provided with USB keys that contained all the needed software to connect and use the platform. This induced problems for software updates and hospital workstation configurations that sometime did not allow USB connections. All the system was updated in order to provide users with a web based access.

In the next sections, the architecture of the system will be presented.

2.2. Architecture

The SeC platform is a distributed platform composed of different layers.
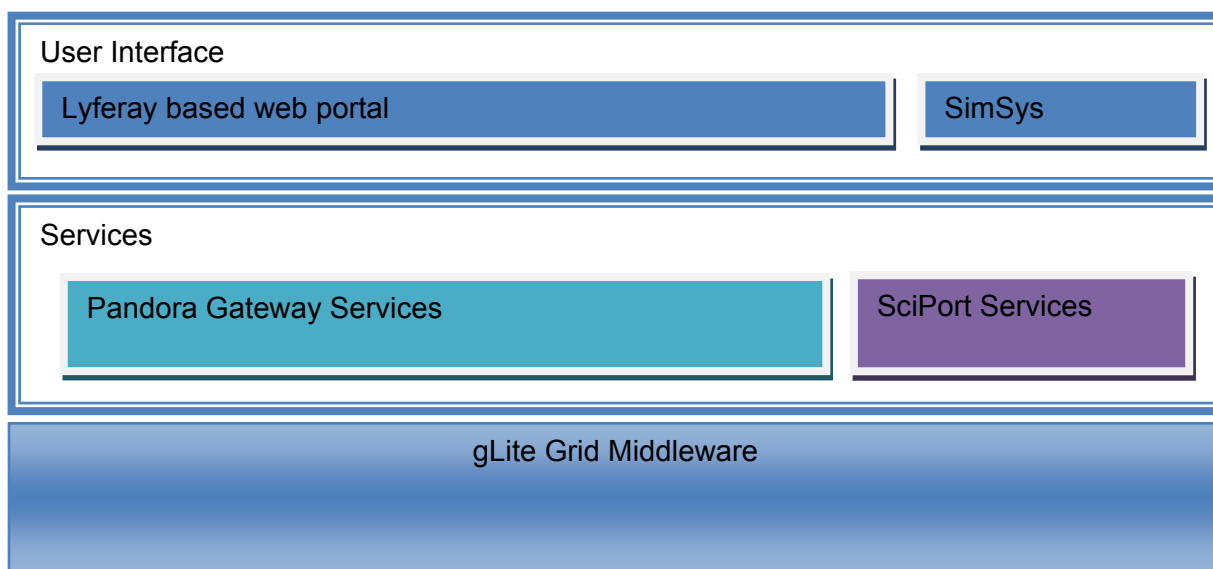
The first layer is the user interface. It is composed of mainly two parts:

- A user interface:
  - Web portal: based on the Liferay technology [4]. It gives access to the many build-in tools like wiki, forums, instant messaging etc., but also to specific SeC ones like:
    - Account initialisation applet: each user who wants to access the system has to follow a well defined procedure and one step of this procedure is to use this applet to create a new account on the system.
    - SciPort web interface: the SciPort services can be accessed using a nice web-based user interface which allows the user to integrate, annotate, and share scientific data.
    - The Desktop Fusion Applet: This gives access to complex applications using a powerful remote desktop technology. It gives, for instance, access to the CaseReasoner which was previously created for the HeC project.

- o SimSyS (former iKDD): provides workflows for patient-specific cardiac modelling and simulation of the left heart as well as advanced quantitative and qualitative analysis, and experiments validation capabilities.

- The services layer:
  - o Pandora Gateway: set of software designed as a Service Oriented Architecture (SOA). It provides APIs to access the grid middleware, to store medical data (used in HeC) and much more. This set of services can be accessed using a high security level but the all system allows hiding most of the complexity of the platform to the end user (SSO using the JASIG CAS technology, web based access using the Liferay portal technology, remote Desktop environment etc…).
  - o SciPort [3]: This is a data management platform with a service-oriented architecture and a web-based user interface. The platform provides tools to integrate, annotate, and share scientific data across research communities. It enables the design of complex data models that integrate experimental data such as documents, spreadsheet, images, annotations, lab results, or genetic information in arbitrary file formats.

- The gLite grid middleware [1][2]: As described in the "D4.1 Grid and Databases Connection Report", the gLite grid middleware is very complex system which allows to share resources. Resources can be disk space or processor time.

3.   Current System Version

This section simply provides the different version of each service installed at month 20 of the project.

3.1.   The User interface

- The Liferay web interface

This portal is available in a war format (used inside Tomcat). It is actively maintained to follow the Liferay web portal updates.

```
========================================================================
  Package                                        Version
========================================================================
  Liferay                                        6.0.6
```
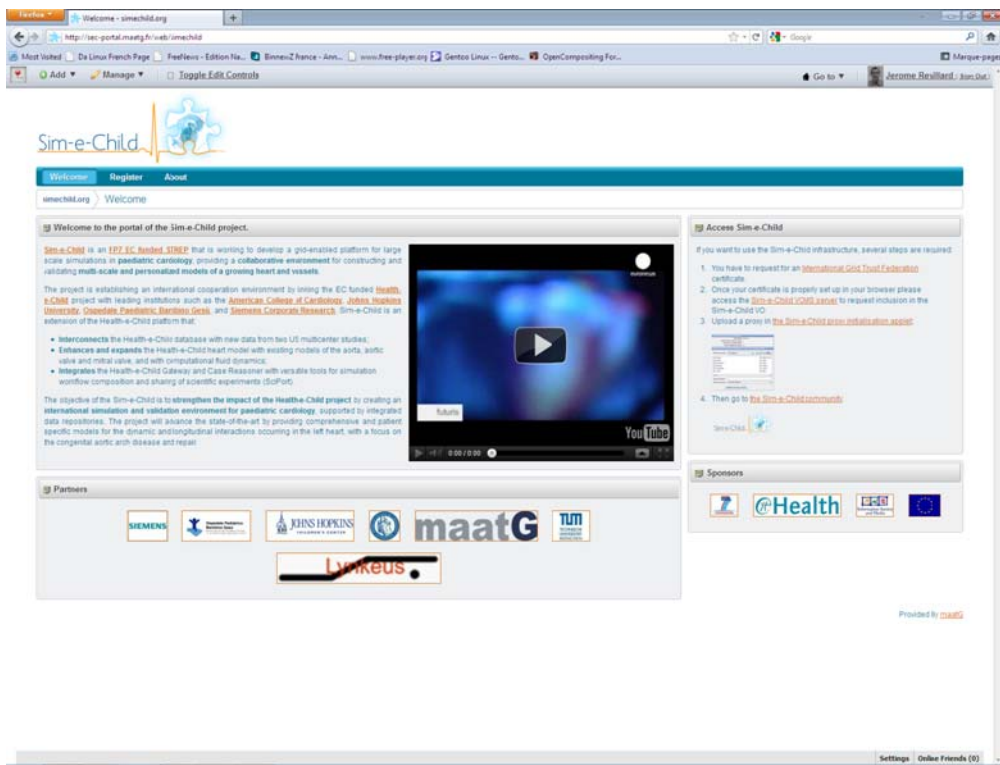

3-1: The SeC portal public main page
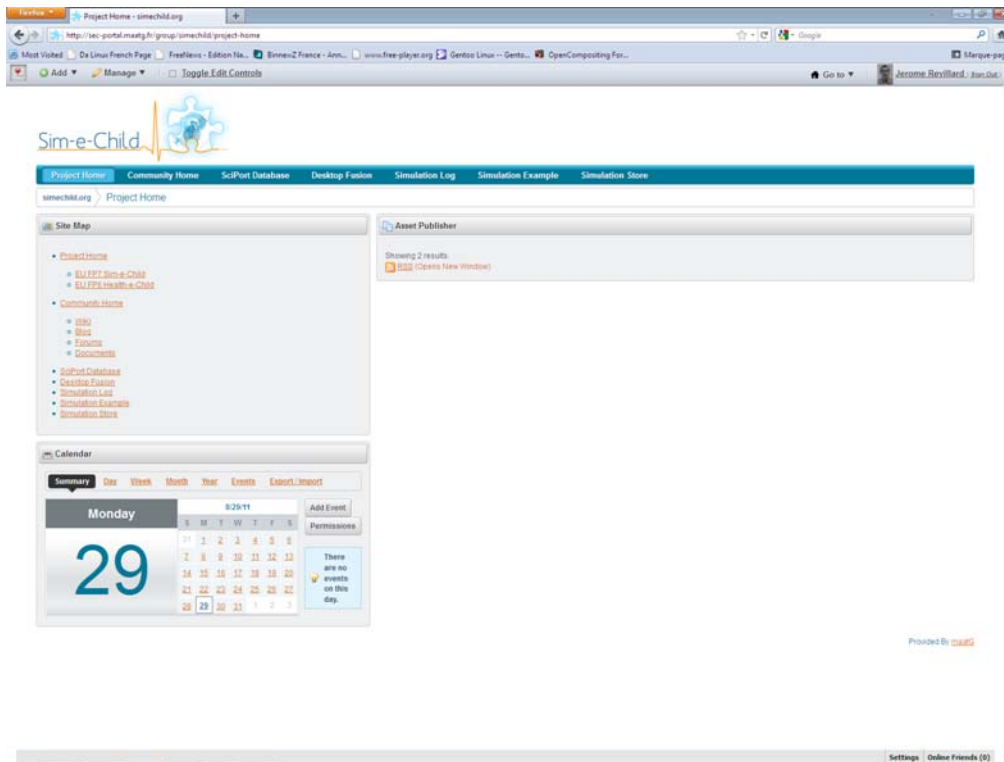
3-2: The SeC portal private main page

- The SimSyS interface

The SimSyS application is a bit different from the other one as it has some really specific hardware requirements. This induces that it has to be installed on specific workstations. It depends also on specific Windows operating system libraries; therefore, it is available as a standard Windows application.

```
===============================================================================
 Package                                        Version
===============================================================================
 SimSys                                         3.0
```
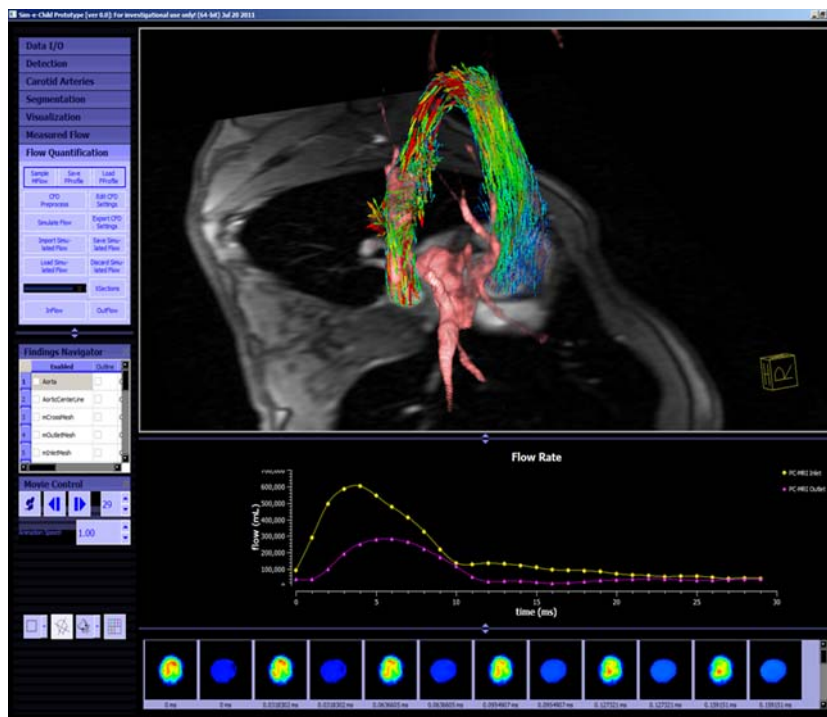
3-3: The SimSys application

3.2. The services layer

- The Pandora Gateway services:

They are available in the rpm format for rhel4 based operating systems. The repository can be found at this public address: http://hec-maat-server18.maat-g.com/hec/repo.

```
=============================================================================
 Package                                                    Version
=============================================================================
 pandora_gridftp                                            4.2.1-2
 pandora_desktop_fusion_translational_medecine_splash       1.0-2
 pandora_sal_cmd                                            1.4.4-0
 pandora_desktop_fusion                                     1.4.0-0
 pandora_idal_integrated_case_data                         1.4.4-0
 pandora_wbar                                               1.3.3-4
 pandora_sal_discovery_grimoires                           1.4.2-0
 pandora_sal_portal                                         1.4.3-0
 pandora_jsaga                                              0.9.11-1
 pandora_sl_core                                            1.4.11-0
 pandora_idal_amga_node_conf                               1.2.4-3
 pandora_sl_authentication                                 1.4.8-0
 pandora_idal_amga_node_conf                               1.2.4-3
 glite-amga-server                                          2.0.1-pre6
 glite-amga-cli                                             2.0.1-pre6
```
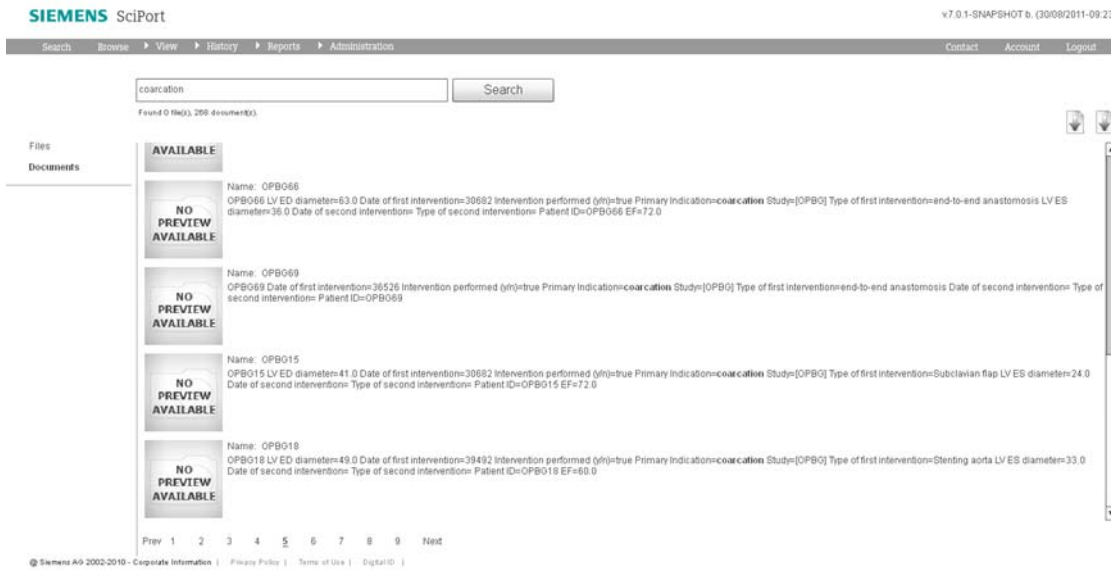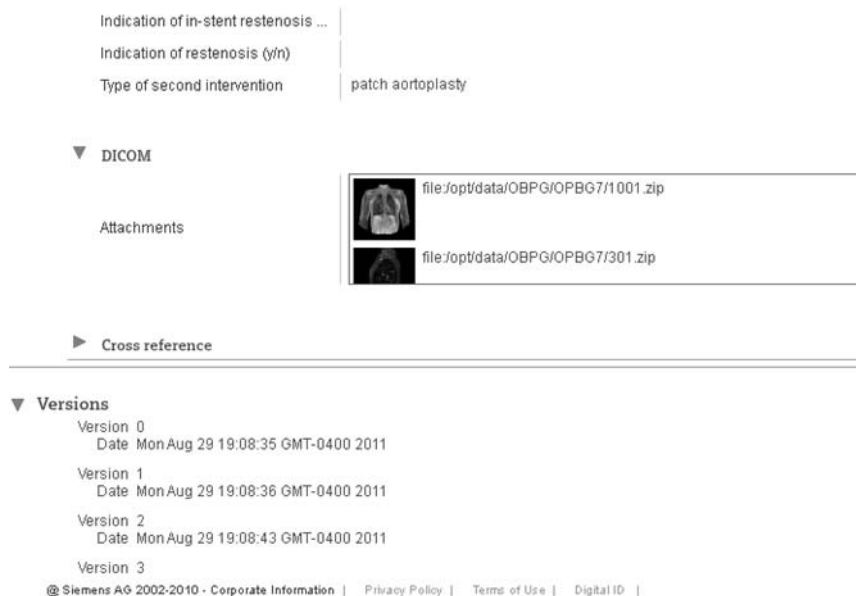
- The SciPort services:

The SciPort system is maintained by SIEMENS and regularly updated. It's available in a war format to be integrated in a Tomcat container.

```
========================================================================
Package                                        Version
========================================================================
SciPort                                        7.0
```
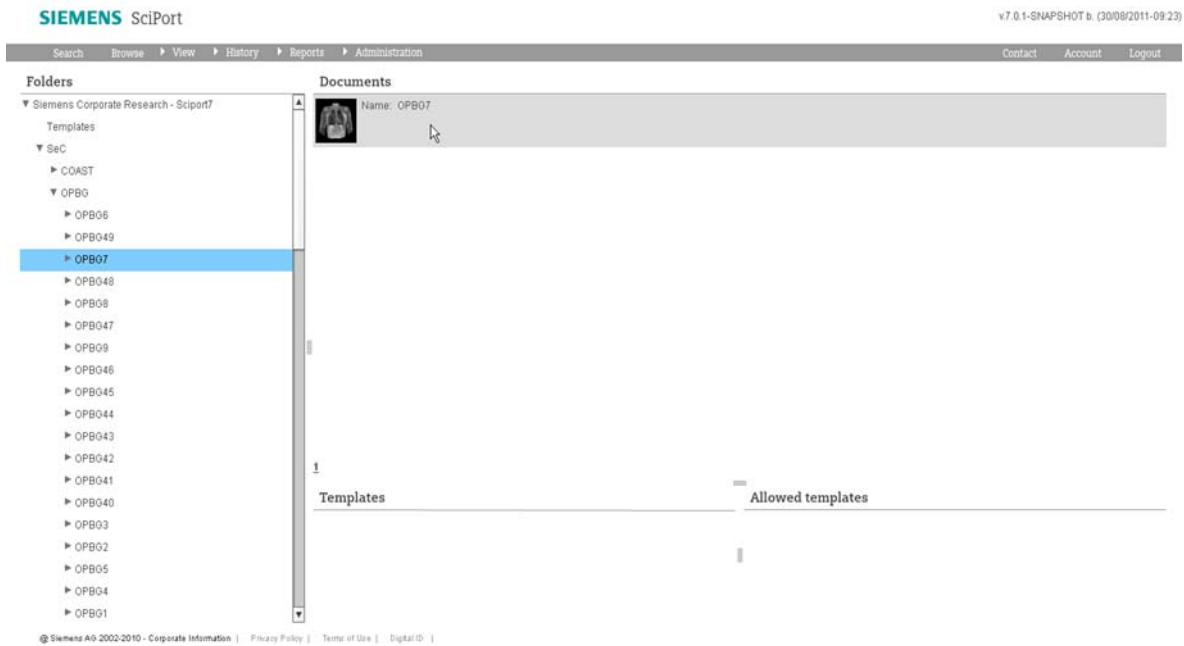

3-4: The search interface

3-5: Image attachment and versioning

3-6: Browsing

3.3. The gLite grid middleware

The gLite grid middleware releases can be found at http://glite.cern.ch/. It is provided in a rpm format for rhel4 and 5.

```
=========================================================================
 Package                                   Version
=========================================================================
 glite-BDII_site                           3.2.11.1
 glite-BDII_top                            3.2.12-1
 glite-CREAM                               3.2.11-2
 glite-LB                                  3.2.12-11
 glite-LFC_mysql                           1.8.0-1
 glite-SE_dpm_mysql                        1.8.0-1
 glite-TORQUE_client                       3.2.7-1
 glite-TORQUE_server                       3.2.3-1
 glite-TORQUE_utils                        3.2.3-4
 glite-UI                                  3.2.10-1
 glite-VOMS_mysql                          3.2.0-8
 glite-WN                                  3.2.11-0
 glite-WMS                                 3.1.32-0
```

4. Conclusion

This deliverable intends to provide a clear picture of the different pieces of software which compose the current Sim-e-Child platform. In the first part, a quick architectural description of the platform was given. It presented the different components of the system. In the subsequent section, each component was detailed in term of available version at Month 20 of the project. A few screenshots were also provided to give an idea of the actual user interface.

This deliverable is an interim report that will be updated at Month 30 with the potential new components and the new versions of the final platform.