NATIONAL SYNCHROTRON RADIATION CENTER
SOLARIS
GeoSynoptic Panel

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GeoSynoptic Panel

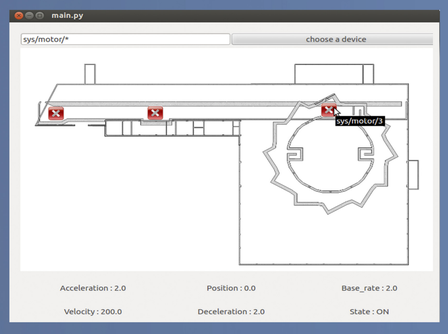
Logo GeoSynoptic Panel

Solaris is a third generation Polish Synchrotron under construction at the Jagiellonian University in Krakow. Moreover, National Synchrotron Radiation Center is member of the Tango Collaboration. The project is based on the 1.5 GeV storage ring which is built at the same time for the MAX IV project in Lund, Sweden. The Solaris project is a prime example of the efficient use of EU regional development funds and sharing the knowledge and resources for the rapid establishment of a national research infrastructure.

Building visualization

FACILITY

National Synchrotron Radiation Centre Solaris budget is 191MLN PLN secured by the EU regional development funds. The Jagiellonian Universityhas allocated land for the facility. The Jagiellonian University and Lund University in Sweden have signed an agreement for the mutual cooperation and sharing of ideas and designs related to the construction of both facilities. Solaris storage ring is an adaptation of smaller ring built in the MAX IV Laboratory in Lund, Sweden with an energy of 1.5 GeV.



Working application with default icons

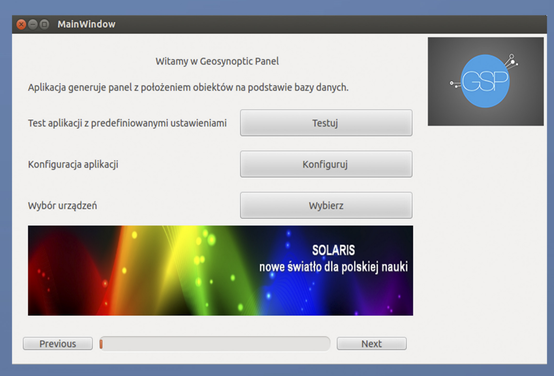
AIMS AND GOALS

The Solaris develops highly customizable and adaptable application called the GeoSynoptic Panel. Main goal of the GeoSynoptic Panel is to provide a graphical map of devices based on information stored in the Tango database. It is achieved by providing additional device/class properties which describe location and graphical components (such as icons and particular GUI window) related to a particular device or class. The application is expected to reduce time needed for preparation of synoptic applications for each individual (part of) machines or subsystems and to reduce effort related to debugging and change management.

APPLICATION

The application is based on two parts. The first part is GSP Configurator and the second part is Generic Panel. GSP Configurator saves all configuration settings in XML file and in the last step after user's confirmation, all settings data are saved in the properties of the device in the database.

GSP Configurator in first step allows user to choose one of three modes.
- Test
- Full configuration
- Choose devices

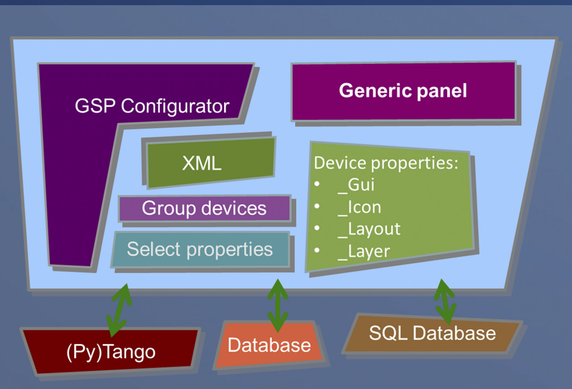


GeoSynoptic Panel - GSP Configurator

BUILDING

The entire surface of the building is nearly 8000 m^2. Experimental hall area with the storage ring is about 3000 m^2. The rest of the space, includes laboratories, offices and conference rooms.

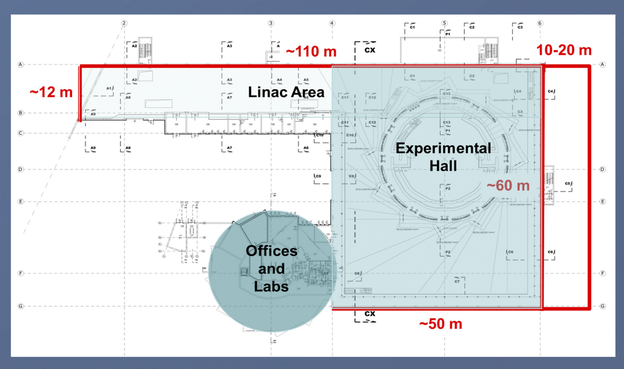
Main building parameters:
- Height of the building: 19.7 m
- Building height above ground: 12.5 m
- Experimental hall 's depth: 3.2 m below ground level
- Linac: length of about 110 m, width of 4.15 m
- Technological tunnel: length of 110 m, width 5.20 m
- Linac tunnel and technological tunnel is located at a depth of 7.7 m below ground level.



Application diagram

FUTURE REQUESTS

Due to the fact that a current version of application is still the beta version. The first aim is to deliver a stable version. Nevertheless, the future development will concentrate on:
New solution for devices location. Present solution with x and y coordinates is temporary, time-consuming and not very effective. The new idea is to divide a graphical map of machine into sections and place devices in selected sections like: linac, (booster +) storage ring, beamlines (e.g. in storage ring in Solaris is 12 bending magnets, each magnets is one section, selecting icon with magnets users can easy and fast split storage ring into sections).
Import/export XML file in the GSP Configurator.
Integration application with EPICS - Experimental Physics and Industrial Control System.



Solaris Building Overview

SOLARIS
NATIONAL SYNCHROTRON RADIATION CENTRE

JAGIELLONIAN UNIVERSITY IN KRAKOW

Project co-financed by the European Regional Development Fund under the Innovative Economy Operational Programme

INNOVATIVE ECONOMY
NATIONAL COHESION STRATEGY

EUROPEAN UNION
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