



Bit By Bit Sp.z o.o. Company presentation

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BitByBit

We are a Polish, privately owned **software development company** based in Poznań, Poland.

Specializing in high-performance and mission control software solutions, we enhance operational efficiency and maximize ROI through cutting-edge design, seamless implementation, and rigorous optimization.

Our expertise ensures reliability and innovation in aerospace, e-health and SmartCities.



Space Sector

We have 8 years of experience with track record of 12 successful projects. Currently we participate in EGS-CC Release Agent, Pilot for Next Generation Central Checkout System and Mission Control System, Microservice based Mission Control Systems and WebUI & SV deployment within SWARM mission for ESOC.

E-health

Our expertise covers Radiology Information Systems (RIS) deployed in around 200 hospitals in Poland, processing several millions of scans yearly.

SmartCities

We create and distribute Lopi a PPGIS (Public Participation Geographic Information Systems), enhancing urban planning and decision-making through citizen engagement and spatial data analysis, including satellite imagery overlayed with city data.



WebUI

Web-based EGS-CC client

- Build with web-based technologies
- Perspectives, widgets/displays, window management system with drag and drop support
- Architecture prepared for extension: dedicated components library, plugin mechanism
- Custom-developed backend API

esa WEBUI 10.10.15.151:444

Archive Management

LIVE

MANAGE PERSPECTIVES

NEW WIDGET

HELP

ABOUT

ADMIN MANCOPS

0 - Archive Browser

1 - Messages Log

Search

2022-03-16 14:03:01.211 - 2022-03-16 14:58:56.266

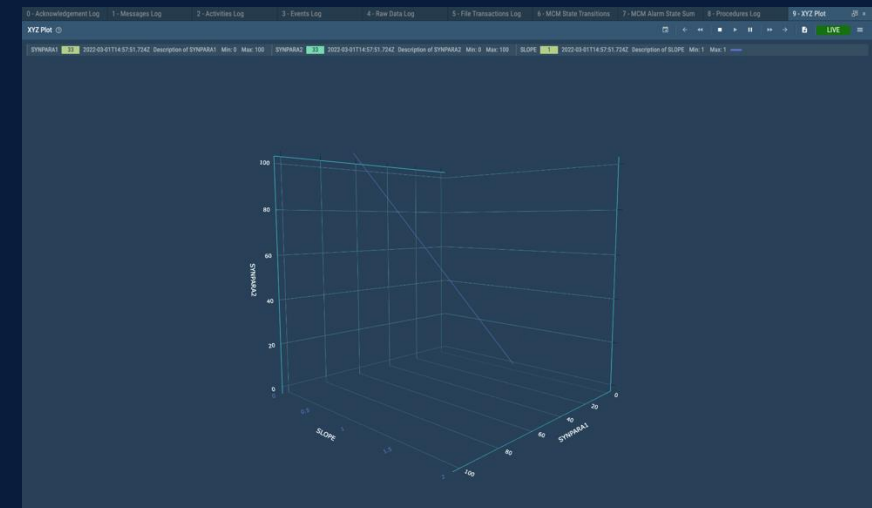
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Navbar – manages perspectives and widgets Navigation tabs for switching between displays Displays menu



Perspective – controls widget on the screen

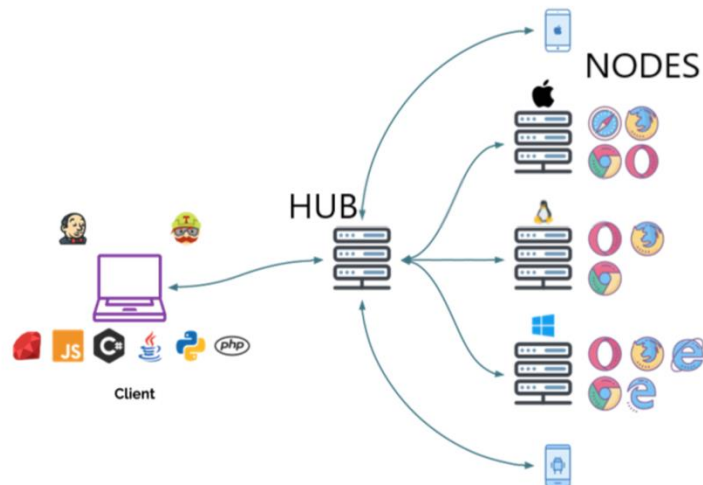
Widgets/displays – presents data and interacts with the user



Scenario Validation

Scenario validation automation:

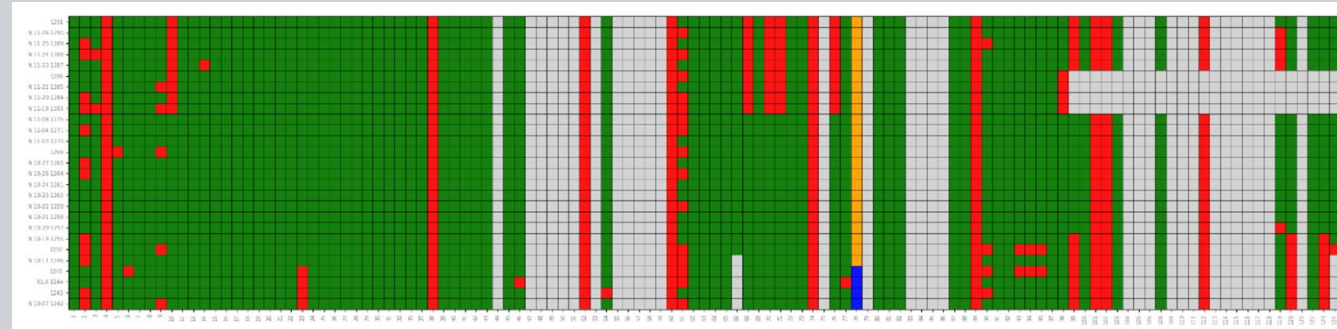
- Test environment setup around Selenium Hub
- Test framework for quick development of the scenarios based on WebUI client
- Gatekeeper scenarios – short and fast check of the main EGS-CC features.
- Advanced reporting and automated runs with Confluence and Jenkins
- RTFSim integration based on custom API
- ParagonTT integration based on Python API



Example of test written with our framework

```
def test_step_01(self):
    self.step_manager.initialize_step(1, f"Send User log message: [{TD1.LOG_SEVERITY_INFO}] '{TD1.LOG_MESSAGE_1}'")
    self.WS1.log_display.add_log(TD1.LOG_MESSAGE_1, TD1.LOG_SEVERITY_INFO)
    self.WS1.log_display.check_message_log(TD1.LOG_MESSAGE_1)
    self.WS1.log_display.check_log_severity(TD1.LOG_SEVERITY_INFO, TD1.LOG_MESSAGE_1)
    self.WS1.log_display.check_log_originator(TD1.LOG_MESSAGE_1)
    self.WS1.log_display.check_log_node(TD1.LOG_MESSAGE_1)
    self.WS1.log_display.check_log_application_instance(TD1.LOG_MESSAGE_1)
    self.WS1.log_display.clear_search_input()
```

Test results visualization for multiple run of the same test



Scenario Validation benefits:

- allows for fast & easy automated tests writing
- provides tools for building automated tests and allows for high configurability
- provides tools for set-up scenario validation automated tests and to implement user-like actions and validations with pass / fail criteria, mimicking user interactions with UI
- provides the methods to conduct the high-level actions and validation in WebUI (EGS-CC), usually defined for validation scenarios
- provides the classes and methods to interact with EGS-CC WebUI displays

We provide:

- **Integration and development of WebUI and Scenario Validation Automation Framework**
- Software development consultancy
- Staff augmentation
- Project development

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