Visualization and Interaction with Synoptics
Implementation based in SVG

SVG Open 2008
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Schedule

• Introduction
• Related Work
• Solution Proposal
• Implementation
• Results
• Conclusion
• Questions
Introduction

- SCADA and Synoptics
- CLP 500 and Web HMI
Related Work

- Mobile SCADA with Thin Clients – a Web Demonstration
- SVG for SCADA Applications
- Control Systems and Real-Time Metering Systems
- ProcessScapeWeb
Implementation

for all o in observers{
    o.update()
}

wait for changes in entities' attributes / qualifiers and animate in accordance.

```
interface Subject
+attach()
+detach()
+notify()

interface Observer
+update()

Graphical Subject

Discreet
+element
+currentState
+getState()
+setState()

Continuous
+property
+setAttribute()
+setLevel()
```
Implementation

Attributes Window
Identifier: OSCRRL3REG1RTTOM
Description: TOMADA

Hierarchy Level 1: CRRL 30kV
Hierarchy Level 2: REGULAÇÃO TENSÃO 1
Hierarchy Level 3:
Hierarchy Level 4:

Level: Normal
Value: 299
Imposed Value: No
Invalid: No
Manual Offset: No
Automatic Offset: No
Undetermined: No
Alarm Unaccepted: Yes

Control Window
Identifier: OSCRRL5PB--S1LIG
Description: SECC BARR 1 FECHAR

Hierarchy Level 1: CRRL 60kV
Hierarchy Level 2: SECCION BARRAS AT
Hierarchy Level 3:
Hierarchy Level 4:

Terminated: Yes
Success: Yes
Status Message: OK

Abort    Execute    Close

Control Window
Identifier: OSCRRL3BC1-E18EL
Description: SEM MIN1 LIG

Hierarchy Level 1: CRRL 30kV
Hierarchy Level 2: BAT CONDENS 1
Hierarchy Level 3:
Hierarchy Level 4:

Terminated: No
Success: No
Status Message:

Value (0 - 59): 40

Abort    Execute    Close

Error: Information
This device has no associated controls!

OK
Results

(Demonstration)
Conclusion

• Project goal was achieved
• Serious difficulties faced
• Lots of foreseen improvements
Acknowledgement

• Co-authors
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• Efacec Engenharia
Questions? Suggestions?

(Thank you for your attention! 😊)