Plotting and Navigating through Data using Dynamic Charts
An SVG-based approach

SVG Open 2010
2010-09-01, Paris
Schedule

• Introduction
• Related Work
• System Design
• Implementation
• Results
• Conclusion
• Questions
Introduction

- SCADA and Trends
- CLP 500 and HMI 500
Related Work

- Windows Performance Monitor
- Sysinternals Process Explorer
- Pretty Web Statistics in SVG
- Electricity Distribution Demo
- JSXGraph Real-time Graphing
- Raphäel Analytics Demo
- Real-Time Minute Data Demo
- SmartGate Load Diagram Sample
System Design

• Technological Selection
  – SVG
  – Flash
  – Swing/AWT
  – XAML

• HTML5 Canvas was not evaluated
Implementation
Leveraging SVG Features

• “viewBox” and “preserveAspectRatio”
• “currentScale” and “currentTranslate”
• Clip paths
• DOM
• ECMAScript
Zoom and Pan for Browsing Through Data

Pros:
• It’s intuitive for users
• Can take advantage of native facilities
• Feasible to implement

Cons:
• Inability to view in detail wide ranges in both axis
Displaying Data Point Details
Results

(Demonstration)
Conclusion

• Project main goal was achieved
• Difficulties faced
Future Work

• Using SVG 1.2 vector effects for non-scaling stroke in lines
• Run-time decluttering support
• Lots of foreseen performance improvements
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Questions? Suggestions?

(Thank you for your attention! 😊)