



Fremont Associates
Process · Project · QA



Fremont Associates and the Furness Toolset

SAE AS2C

Detroit, Michigan

5 April 2006

The Furness Toolset

- ▶ 1. Montana → Furness (trademark issues)
- ▶ 2. Why Furness?
 - Frank Furness, leading architecture of the Victorian era. Designed the Fisher Fine Arts Library at the University of Pennsylvania.
 - Tools are a joint effort of Fremont Associates and Penn under an AFOSR STTR.



The Furness Toolset

▶ Goals

- Develop analysis tools for AADL
- Present the tools so that they are attractive to practicing engineers
- Spread the gospel
 - ▶ No more systems designed with Word, PowerPoint, Excel and a compiler

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▶ Business Model

- Give the stuff away
- Sell support
 - ▶ Pays for traditional customer service roles
 - ▶ Pays for ongoing maintenance and enhancements



Fremont Associates and the Furness Toolset

▶ Focus Areas

- Traditional embedded systems applications
 - ▶ Avionics, Automotive, robotic dogs
- Plug-and-play Medical Devices
 - ▶ Emerging system-of-systems problem
 - ▶ Driven by demands of demanding (but naïve) users

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▶ Current activity

- Creating a conformance test suite for AS5506
 - ▶ Currently > 1000 test cases, perhaps 20% complete
- Reporting bugs
 - ▶ OSATE
 - ▶ TOPCASED
- Creating a simplified task-centric Eclipse perspective
 - ▶ Attempts to mimic source/object/debug/execute
- Implementing analysis techniques
 - ▶ ACSR for schedulability analysis
 - ▶ Charon for behavioral specification

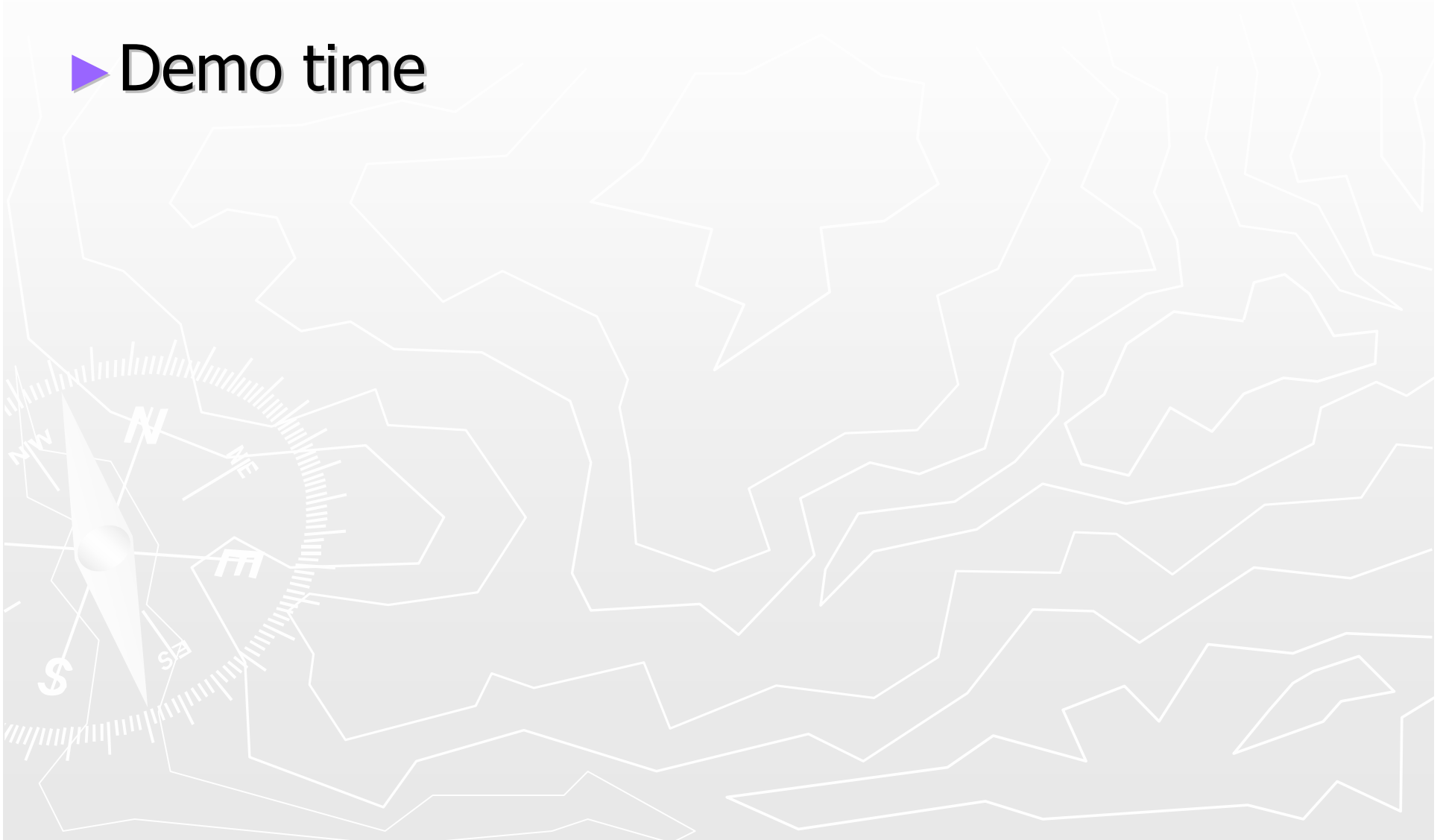
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- ▶ Furness Toolset 1.0.0 contains
 - OSATE fend/analysis 1.2.3
 - TOPCASED 0.8
 - VERSA plug-in 1.0.0 (schedulability analysis)

Install packages, guidance, Eclipse update site available via web.

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► Demo time



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► Contacts

- Duncan Clarke
- Fremont Associates
- dclarke@fremontassociates.com
- Oleg Sokolsky
- University of Pennsylvania
- sokolsky@upenn.edu

Fremont Associates and the Furness Toolset

- ▶ End-user (and potential end-user) input is critical
 - Goals
 - ▶ Develop analysis tools for AADL
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Fremont Associates and the Furness Toolset

- ▶ (My) sense of the meeting
 - AADL Advocates say...
 - ▶ There are robust, high-quality tools available that are being applied to myriad realistic problems.
 - Potential end-users say...
 - ▶ We're waiting for robust, high-quality tools and looking for evidence that they've been applied to real problems.
 - ▶ Profiles for established tools (block-set for Simulink) might be all we need.
 - Vendors of established tools say...
 - ▶ As little as possible.
- ▶ What's missing?