INTRODUCTION

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- SSI Schaefer IT Solutions GmbH – part of the privately held SSI Schaefer group
- More than 9000 employees worldwide – around 900 in IT

- WAMAS – WArehouse MAnagement System
  - Standard logistics software for manual and fully automated warehouses and combinations
  - Supports the entire intralogistics process chain
  - WMS (“keeping track of stuff”) and MFS (“moving stuff around” – incl. hardware control)
  - Java/Eclipse based WAMAS 5 around since 2007
AGENDA

1. What is Eclipse TEA
2. Brief Eclipse TEA History
3. What is the Eclipse TEA library
4. When to use TEA core/library
5. Drawbacks of the approach
6. Demos!
7. Conclusion / How to get TEA
WHAT IS ECLIPSE TEA?

According to the Homepage:

“TEA is a set of extensions for the Eclipse IDE with the primary goal to automate tasks in a way, so they can be executed both in the IDE as well as in headless environments. A great portion of TEA deals with making it possible to execute the very same actions (e.g. compiling a project) from the IDE as well as headlessly without any additional configuration or setup effort. Along with the core components of TEA itself, an extensive library of prebuilt tasks and actions comes along in the package.”
WHAT IS ECLIPSE TEA?

WAMAS® Power Build
(closed source)

Task Execution Core
- Headless application
- Dynamic task configuration and preferences
- Statistics reporting
- Logging (and console integration)
- Progress Tracking (and estimation)
- Dynamic IDE integration
- EASE scripting
- Execution visualization

Common Task/TaskChain library
- Build orchestration
- JDT/PDE integration
- Maven integration
- P2 integration
- LcDsl integration

Come see the BoF “LcDsl: a new dawn for launch configurations” (Wed. 18:30 Wilhelm-Krämer-Zimmer)
Formerly named “WAMAS Power Build” – already indicates strong initial focus on “build” (created ~2011)

Main Focus: Speeding up builds in the IDE (by implementing build orchestration, …).

Main Focus: replace ‘ant’ based headless build.

By providing the IDE-only build functionality including build orchestration as headless application

No more duplicate configuration, simple Jenkins tasks: run a TEA TaskChain to setup and build workspace

Byproduct: infrastructure to easily extend the IDE with arbitrarily complex tasks (written in Java)

Easy reuse of tasks, modular TaskChains with stable, reproducible results.

Around 38 KLOC before migration to TEA

Around 10 KLOC migrated to TEA and/or TEA Build Library right now.
## COMPONENTS OF ECLIPSE TEA

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEA LiveView</td>
<td>Task Execution Visualization</td>
</tr>
<tr>
<td>TEA EASE integration</td>
<td>Eclipse EASE scripting modules, Support for scripts as TEA tasks</td>
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<tr>
<td>TEA Build Library</td>
<td>TEA Build Library LcDsI integr. Launch configuration based P2 generators (features, update sites, products)</td>
</tr>
<tr>
<td>TEA Core UI</td>
<td>Dynamic IDE Menu, Advanced headless application, E4 Event bridge, TEA Console, Eclipse Preference integration, Progress estimation</td>
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<tr>
<td>TEA Core</td>
<td>Task Execution Control, Headless application, Lifecycle, Configuration, Statistics, Logging, Progress Tracking</td>
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WHEN TO USE ECLIPSE TEA

- Whenever a task in the IDE should be automated for developers
- If a task should be used headlessly and in the IDE by developers
- When tasks get huge (or numerous).
- Tasks can be used on empty workspaces (to set them up) easily
- In reality: a good mix between TEA and EASE gives good results.
  - Rule of thumb: provide basic (“framework”) functionality (tasks) in TEA, use them with EASE
WHEN TO USE ECLIPSE TEA LIBRARY

- Build orchestration brings some benefits for complex builds
- Up front dependency calculation and proper build element ordering speeds up builds
- Allows build steps not related to a single project (generators, initial project(s) import, …)
- Integration of external contributions to the overall build (e.g. generators that are themselves source in the workspace)
  - Without the need to create a “fake” dependency to the generator project.
- Provides tasks to build projects, update sites, products and much more.
- Provides integration with the LcDsl project
• When used headlessly, there is a need to have an Eclipse installation with the required TEA tasks installed.

• Having an Eclipse installation for headless tasks requires a DISPLAY to be available (on X11).

• In corporate environments a strategy to update these headless Eclipse installations is required.
  • SSI has Lifecycle integration that automatically updates Eclipse when running TEA.
DEMOS!
HOW TO GET TEA?

https://www.eclipse.org/tea/
Evaluate the Sessions
Sign in and vote at eclipsecon.org

-1 0 +1
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