University of California
Lawrence Livermore National Laboratory

Code Number

Read instructions before completing

Document Release Form for Code Release

OCEC: No. 08-055 LL6566

1. Code Title

Code Version: 1

tox (Tomcat, Oracle, & XML) framework for model/view/controller web applications.

LLNL Author Contact David Craig Cothren Employee No. 005922 Ext. 3-5179 L- 621

Administrative Contact David Craig Cothren Employee No. 005922 Ext. 3-5179 L- 621

Directorate and Dept./Div. Computation/CAR/S&TC

Program Account 3616-07 Payroll Account 9818

Authors (Please provide either the LLNL employee number or the author's affiliation)
David Craig Cothren, Computation/CAR/S&TC

2. Review Criteria

☐ Yes ■ No LDRD Funding was used on this project. Tracking #

☐ Yes ■ No In my opinion, the computer code or software contains new functionality, is new code for electronic devices, adaptive control, numerical control, multi-data-stream processing software; or is a compiler code or service/engineering code.

If Yes, ☐ I have submitted ☐ I have not submitted
to the LLNL Patent Office a written Record of Invention (ROI) regarding any of the material in this code.

If you have submitted a ROI, please provide:

Record of Invention File Number

Inventor's Name(s)

Title

☐ I have made ☐ I have not made improvements not included in the preceding ROI.

☐ I have ☐ I have not described these improvements in this code.

☐ Yes ■ No Cooperative Research and Development Agreement (CRADA) information is included in this code.

■ Yes ☐ No The Technology (information) will be, or is in the public domain that is, it is generally accessible or available to the public, e.g., already published, educational, included in patents, in public libraries, fundamental research, etc. If No, an export control review is needed if this code is unclassified.

☐ Yes ■ No Does your code contain any National Ignition Facility (NIF) derived/related data or information?

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3. CODE Release Information (read instructions before completing)

3a. Author Certification

1. Code Category

■ DUSA Code DUSA Title MATHEMATICS & COMPUTATION - MATHCOMP

☐ Non DUSA Code

2. Code Specifics

a. Code Type: ☐ Physics ☐ Engineering ☐ Utility Software ☐ System ■ Application

Please specify contents (see instructions 2.a) Model/View/Controller Web Application Framework

b. ☐ Source Code ☐ Executable Code ■ Both

c. ☐ Yes ■ No This code (or an earlier version) was previously determined to be releasable as unclassified.

If yes, code title and version:

d. ☐ Yes ■ No Code manual/user guide (not Simple documentation).
If yes, a separate review is required through the IM system.

e. ☐ Yes ■ No Code in development

Approximate number of collaborating groups or individuals

Expected duration of collaboration 1, David Craig Cothren

Are any of the collaborators:

Under contract to LLNL? ☐ Yes ■ No

If Yes, Name Contact

Foreign nationals? ☐ Yes ■ No

If Yes, Name Contact

3. ■ Yes ☐ No Range of unclassified applications is obvious to non-specialist from either the code or documentation.
4. ☐ Yes ■ No All authors, developers or users are cleared, and all work is within a limited area.
5. ☐ Yes ■ No The code contains military, intelligence, security-related models or simulations.
6. ■ Yes ☐ No The referenced code is explicitly free of classified information.
7. ■ Yes ☐ No All funding comes directly or indirectly from DOE, or sponsors have provided classification guidance.
8. ☐ Yes ■ No Record of Invention (ROI) has been completed on this code.
9. ☐ Yes ■ No License through IPAC Development Acct No.
10. ☐ Yes ■ No Freedom of Information of Act Request (attach copy of request and DOE approval for request)

3b. Code disposition

A. ■ Open Source

B. ☐ Other: ☐ Limited ☐ Unlimited

Authors Signature _____ Date 6/3/2008

3c. Directorate Confirmation

Dissemination of this code to the above disposition is allowable, consistent with LLNL's classification and UCI requirements.

Program or Designee name Ron Schmucker Employee Number 792044

Program AD or Designee Signature _____ Date 1/16/08

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4. Authorized Derivative Classifier (if DUSA do not complete this section)

Code Is: ☐ Unclassified ☐ OUO ☐ UCNI

Reason for Unclassified release

☐ Outside scope of AEA and EO ☐ CG-DAR-2, Topic(s)

☐ Other Guide(s) Topic(s)

As the reviewing ADC, the information in this source code is within my technical competence and programmatic purview and I am familiar with the project work and classification guidance related to this code.

ADC Reviewer Name _____ Employee Number Title

ADC Reviewer Signature _____ Date

5. Office of Classification and Export Control

Code Review

Classification

- ■ Code is a DUSA per author
- ☐ Code is unclassified (U, OUO, UCNI) per ADC review
- ☐ Code is unclassified as amended

Comments

Mathematics and Computation DUSA confirmed by ADC review, Evi Dube (3-6021).

Export Control

- ■ Open source, this code is not export controlled
- ☐ Unlimited, this code is not export controlled
- ☐ Limited, this code is export controlled per

OCEC Release

- ■ This code can be released based on the classification, and export control determinations.
- ☐ This code cannot be released based on the classification, and export control determinations. RETURN TO AUTHOR.

Comments

OCEC Reviewer Name R. GRAYSON Employee Number

OCEC Reviewer Signature Grayson Date 6/4/08

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6. Intellectual Property Review

6a. Patent Release

- [x] No new potentially patentable inventions or discoveries, made or conceived under Contract W-7405-Eng-48 are deemed to be described in this code.
- [ ] Inventions described in this document have been published, offered for sale, or previously used in the public domain.
- [ ] Inventions described in this document have been reported on the following Record of Invention:

IL- S- IL- S-

Comment: Comment:

- [ ] Received approval from the Department of Energy. DOE Release

Therefore, there is no objection from the patent standpoint, to release of this work as follows:

- [x] Unlimited Release
- [ ] Controlled to Specific Distribution
- [ ] Label "B"

IPAC Comments:

IPAC Reviewer Name: B. J. WELS Employee No. 03497

IPAC Reviewer Signature: _____ Date 12/12/08

6b. Code Release

Code Distribution

- [ ] Limited: [ ] Licensees [ ] Code-in-development
- [ ] Unlimited
- [x] Open Source: [x] GPL [ ] LGPL [ ] BSD

Notices: [ ] 1 [ ] 2 [ ] 3

Comments

IPAC Reviewer Name: Leah Rogers Employee Number 760075

IPAC Reviewer Signature Leah Rogers Date 12/18/2007

January 15, 2008

To: Information Management (IM), L-662
From: David Craig Cothren, (cothren2@llnl.gov)
Subject: Memorandum for Record for Software Release of tox

The tox (Tomcat Oracle & XML) web archive is a foundation for development of HTTP based applications using Tomcat (or some other servlet container) and an Oracle RDBMS. Use of tox requires coding primarily in PL/SQL, JavaScript, and XSLT, but also in HTML, CSS, and potentially Java. Coded in Java and PL/SQL itself, tox provides the foundation for more complex applications to be built.

This is the first release of tox, version 1.0, to the public.

The functionality of tox is not specific to any LLNL, NNSA, nor DOE application and contains no data pertaining to these. Per the ADC review by Evi Dube this code qualifies under the DUSA, Mathematics and Computation.

Abstract for Software Release of tox

The tox (Tomcat Oracle & XML) web archive is a foundation for development of HTTP based applications using Tomcat (or some other servlet container) and an Oracle RDBMS. Use of tox requires coding primarily in PL/SQL, JavaScript, and XSLT, but also in HTML, CSS, and potentially Java. Coded in Java and PL/SQL itself, tox provides the foundation for more complex applications to be built.

The source code for tox was written by David Craig Cothren, who is a member of the Science & Technology Computing Division (S&TC) under the Computing Applications & Research Department (CAR) under the Computations Directorate.

The tox software was completed in January 2008. It is a derivative of the XML Oracle Interop (xoi) software that was also written by Mr. Cothren. The xoi software is a more primitive version of the same functionality with deprecated interfaces.

The tox framework enables the construction of applications using the model/view/controller (MVC) design pattern. With a controller that executes interpreted XML for creating the model and view, developers can construct new functionality. The model is retrieved either via includes or by the execution of Oracle's stored procedures and then passed to an XML Stylesheet transform (XSLT) to construct and return the view. Different combinations and options provide rich dynamic content.

The tox web archive (war) is designed to run within a tomcat installation against an Oracle relational database. Tomcat is available from the Apache Software Foundation at http://tomcat.apache.org/. The tox war has been tested with version 5.x of tomcat. Oracle's relational database is a commercial database, available from Oracle Corp. at http://www.oracle.com.

Addendum to the "Abstract for Software Release of tox" per the formatting specified in Information Management's Technical Information Department's format description at https://im-int.llnl.gov/rr-software-abst-inst.html.

LLNL has adopted the Energy Science and Technology Software Center's (ESTSC) Abstract Format Description. Please include the following information in your abstract:

1. **Identification**. Used to uniquely identify the software.
   a. Software Acronym: tox
   b. Short or Keywords in context (KWIC) title: tox (Tomcat Oracle & XML) web archive.
2. **Developer Name**: The source code for tox was written by David Craig Cothren, who is a member of the Science & Technology Computing Division (S&TC) under the Computing Applications & Research Department (CAR) under the Computations Directorate.
3. **Software Completion Date**: January 2008
4. **Brief Description**: The tox (Tomcat Oracle & XML) web archive is a foundation for development of HTTP based applications using Tomcat (or some other servlet container) and an Oracle RDBMS. Use of tox requires coding primarily in PL/SQL, JavaScript, and XSLT, but also in HTML, CSS, and potentially Java. Coded in Java and PL/SQL itself, tox provides the foundation for more complex applications to be built.
5. **Method of Solution**: The tox framework enables the construction of applications using the model/view/controller (MVC) design pattern. With a controller that executes interpreted XML for creating the model and view, developers can construct new functionality. The model is retrieved either via includes or by the execution of Oracle's stored procedures and then passed to an XML Stylesheet transform

(XSLT) to construct and return the view. Different combinations and options provide rich dynamic content.

6. **Computers for which the software is written**: tox will run on any platform that supports a fully functional Java Virtual Machine (JVM).
7. **Operating System**: tox will run on any platform that supports a fully functional Java Virtual Machine (JVM).
8. **Programming Languages Used**: Java and PL/SQL
9. **Software Limitations**: tox will scale to the hardware and software resources allocated to it.
10. **Unique Features**: The tox framework enables the construction of applications using the model/view/controller (MVC) design pattern. With a controller that executes interpreted XML for creating the model and view, developers can construct new functionality. The model is retrieved either via includes or by the execution of Oracle's stored procedures and then passed to an XML Stylesheet transform (XSLT) to construct and return the view. Different combinations and options provide rich dynamic content.
11. **Related and Auxiliary Software**: The tox web archive (war) is designed to run within a tomcat installation against an Oracle relational database. Tomcat is available from the Apache Software Foundation at http://tomcat.apache.org/. The tox war has been tested with version 5.x of tomcat. Oracle's relational database is a commercial database, available from Oracle Corp. at http://www.oracle.com.
12. **Other Programming or Operating Information or Restrictions**: None.
13. **Hardware Requirements**: tox will run on any platform that supports a fully functional Java Virtual Machine (JVM).
14. **Time Requirements**: tox itself runs in sub-second times on all tested platforms.
15. **References**: None.