Department of Veterans Affairs
Veteran Health Administration
Knowledge Based Systems

Informatics Architecture Support Services

Organizing the ISAACS/KOMET Documentation: DocBook Source content, Maven Builds, and Web Publishing

Walter Sujansky
Sujansky & Associates, LLC

Veterans Health Administration, Office of Informatics & Analytics and Health Informatics Informatics Architecture
Support Services Contract VA701-16-C-0039 CLIN 0012, 5.4.1A. Bi Weekly Web Based Workshops

Dec. 18, 2017

www.BookZurman.com

Outline

- Review of documentation architecture
    - ISAACS/KOMET DocBook repository (GitHub)
    - ISAACS/KOMET DocBook editing environment (IDE)
    - ISAACS/KOMET DocBook publishing (web site)
- The structure of ISAACS/KOMET documents
- Building ISAACS/KOMET documents with Maven
- Review of current ISAACS/KOMET content
- Recommendations

Relevant Terms

- Github repository
- DocBook XML format
- Document project
- Maven build
- KOMET Compendium
- KOMET Abridged
- KOMET Articles

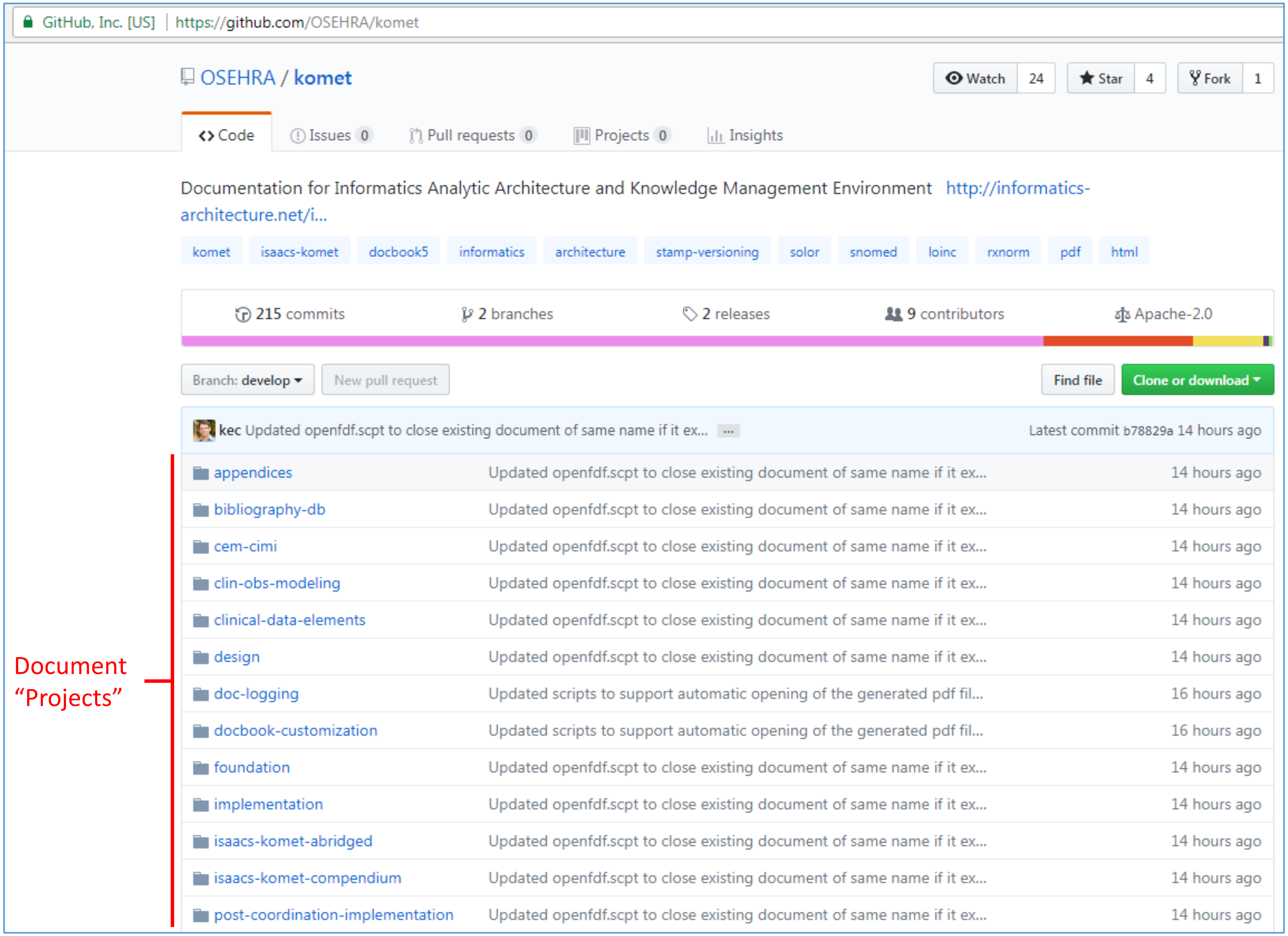
Management of Documentation Content

Shared Storage &
Version Control

Github KOMET
Documentation
Repository

(github.com/OSEHRA/komet)

Github Komet Repository



GitHub, Inc. [US] | https://github.com/OSEHRA/komet

OSEHRA / **komet**

Watch 24
Star 4
Fork 1
Code
Issues 0
Pull requests 0
Projects 0
Insights

Documentation for Informatics Analytic Architecture and Knowledge Management Environment http://informatics-architecture.net/i...

komet
isaacs-komet
docbook5
informatics
architecture
stamp-versioning
solor
snomed
loinc
rxnorm
pdf
html

215 commits | 2 branches | 2 releases | 9 contributors | Apache-2.0

Branch: develop
New pull request
Find file
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kec Updated openfdf.scpt to close existing document of same name if it ex... … Latest commit b78829a 14 hours ago

appendices	Updated openfdf.scpt to close existing document of same name if it ex...	14 hours ago
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cem-cimi	Updated openfdf.scpt to close existing document of same name if it ex...	14 hours ago
clin-obs-modeling	Updated openfdf.scpt to close existing document of same name if it ex...	14 hours ago
clinical-data-elements	Updated openfdf.scpt to close existing document of same name if it ex...	14 hours ago
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isaacs-komet-compendium	Updated openfdf.scpt to close existing document of same name if it ex...	14 hours ago
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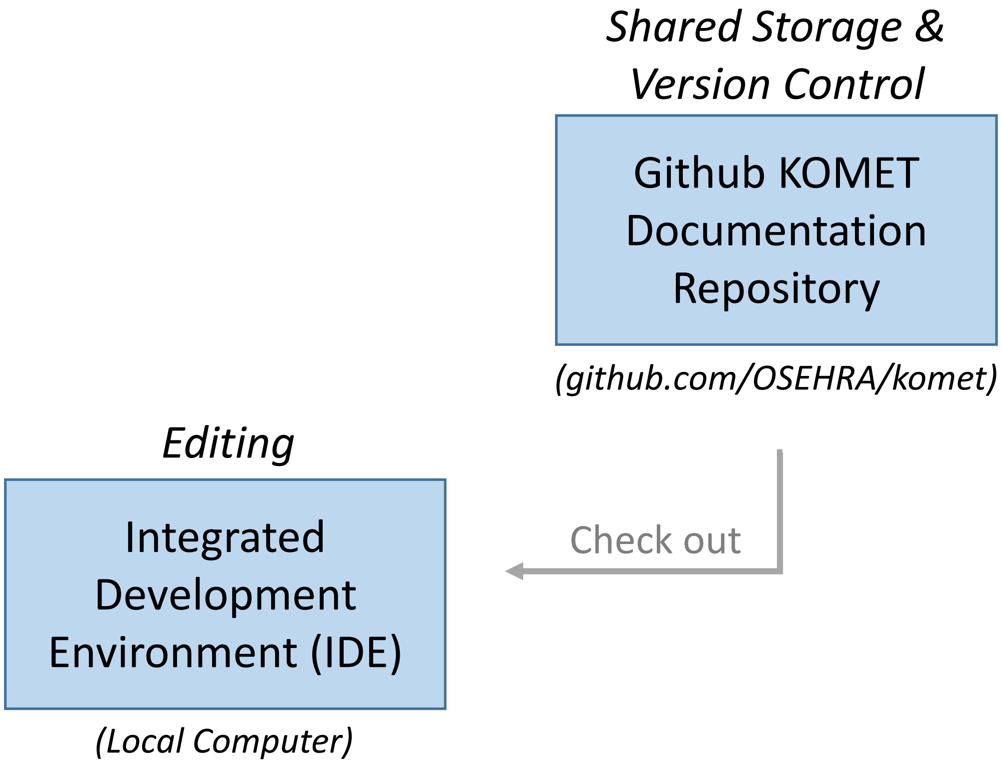
Document “Projects”

Management of Documentation Content



Shared Storage & Version Control

Github KOMET Documentation Repository

(github.com/OSEHRA/komet)

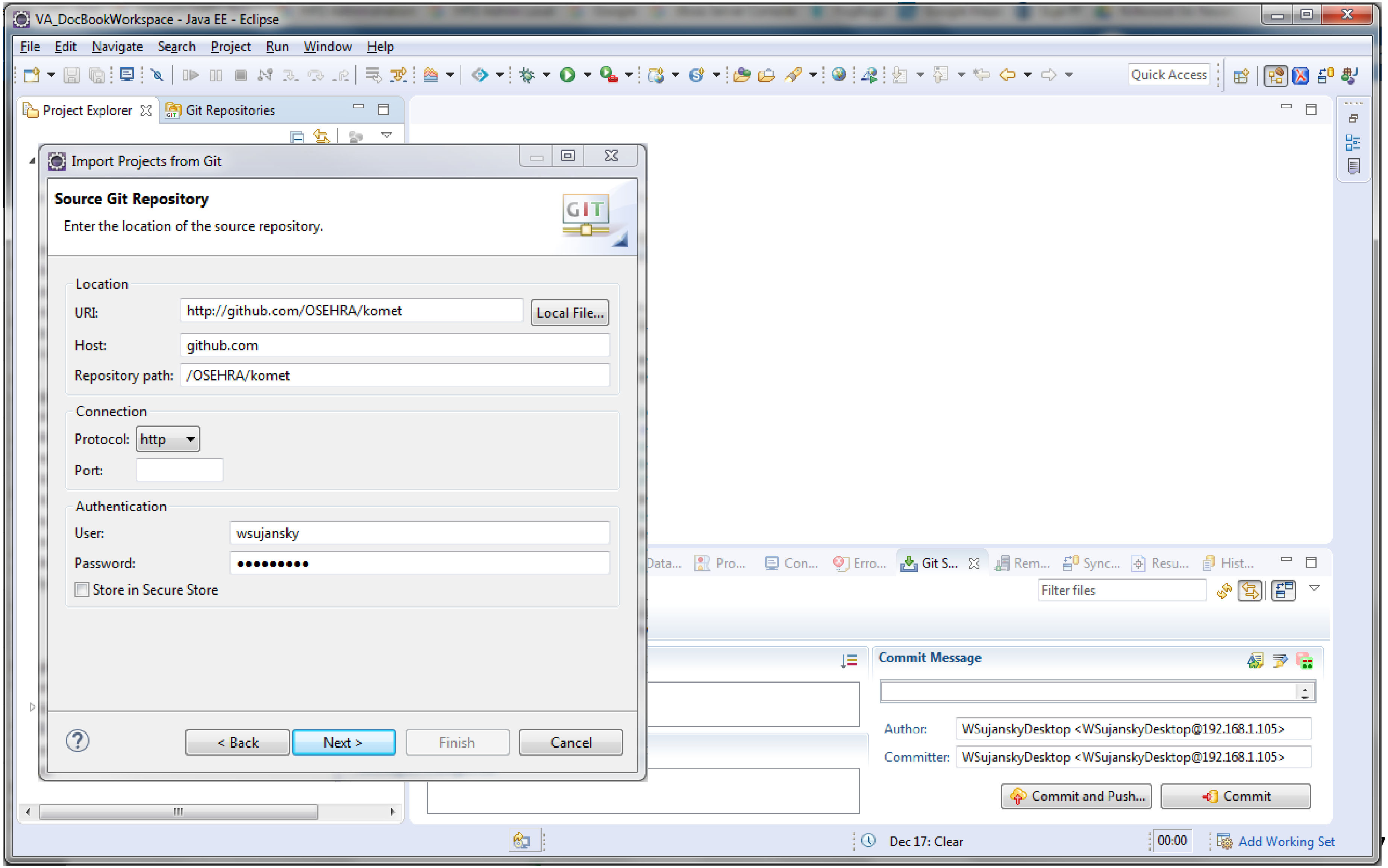
Check out

Editing

Integrated Development Environment (IDE)

(Local Computer)

Integrated Development Environment (IDE)



VA_DocBookWorkspace - Java EE - Eclipse

Import Projects from Git

Source Git Repository

Enter the location of the source repository.

Location

URI: http://github.com/OSEHRA/komet

Host: github.com

Repository path: /OSEHRA/komet

Connection

Protocol: http

Port:

Authentication

User: wsujansky

Password: ●●●●●●●●●

☐ Store in Secure Store

Commit Message

Author: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

Committer: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

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Edit
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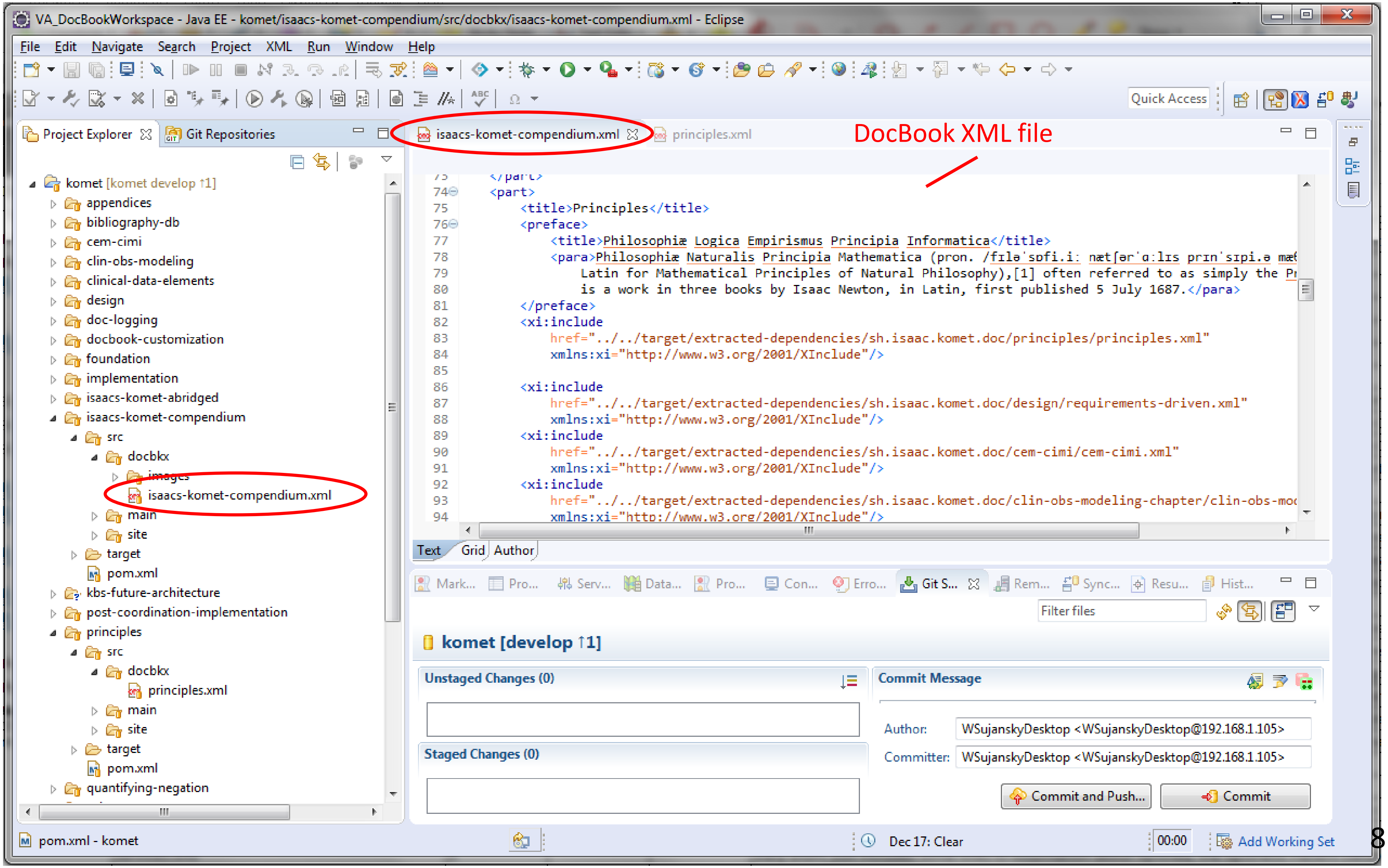

DocBook XML file

VA_DocBookWorkspace - Java EE - komet/isaacs-komet-compendium/src/docbkx/isaacs-komet-compendium.xml - Eclipse

File Edit Navigate Search Project XML Run Window Help
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isaacs-komet-compendium.xml
principles.xml

- komet [komet develop ↑1]
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  - principles
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      - main
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    - target
    - pom.xml
  - quantifying-negation

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            <para>Philosophiæ Naturalis Principia Mathematica (pron. /fɪləˈsɒfi.iː nætʃərˈɑːlɪs prɪnˈsɪpi.ə mæθ
                Latin for Mathematical Principles of Natural Philosophy),[1] often referred to as simply the Pr
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Filter files

komet [develop ↑1]

Unstaged Changes (0)

Staged Changes (0)

Commit Message

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Committer: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

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Commit
pom.xml - komet
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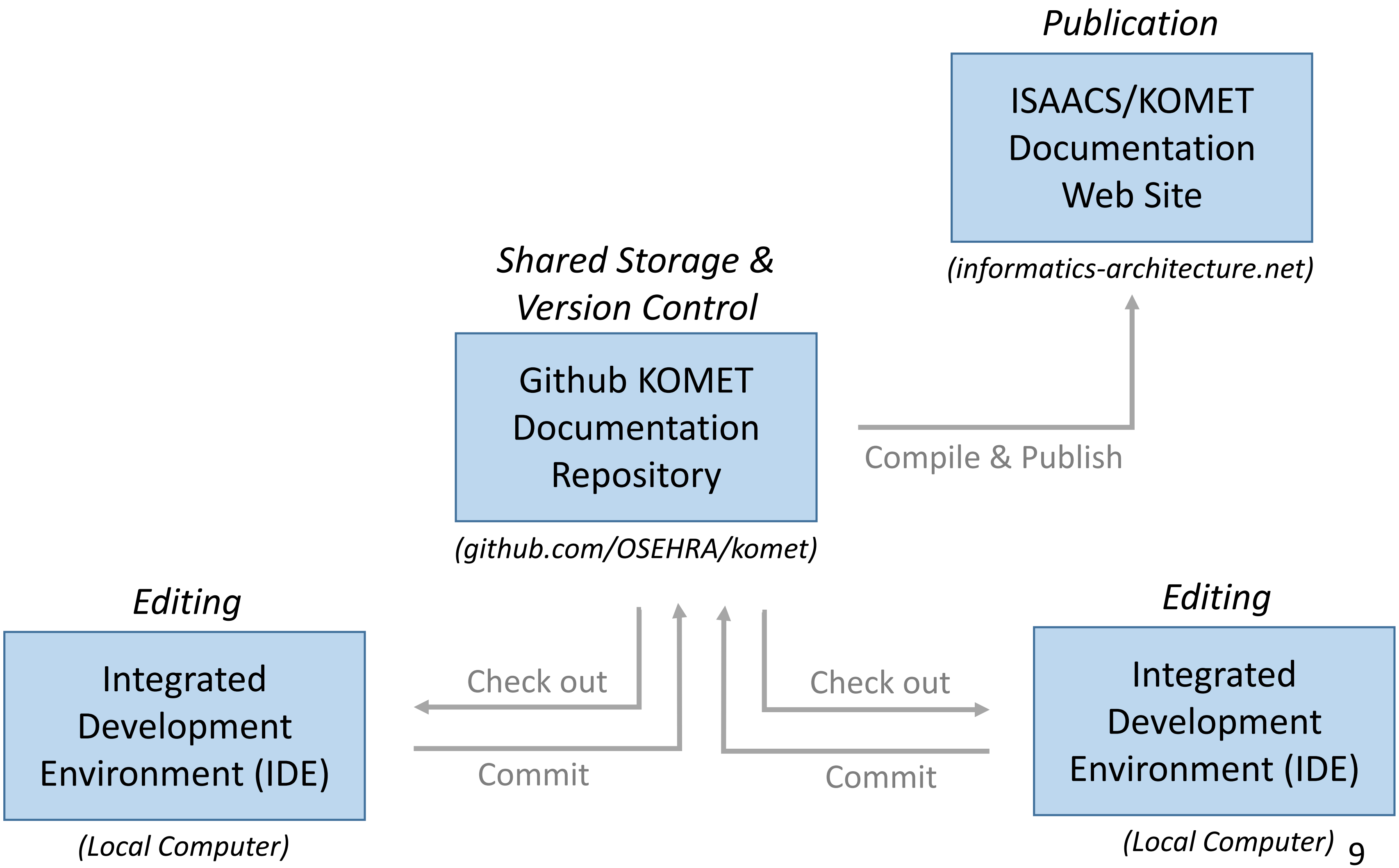

Publication

ISAACS/KOMET Documentation Web Site

(informatics-architecture.net)

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(Local Computer)

Check out

Commit

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Commit

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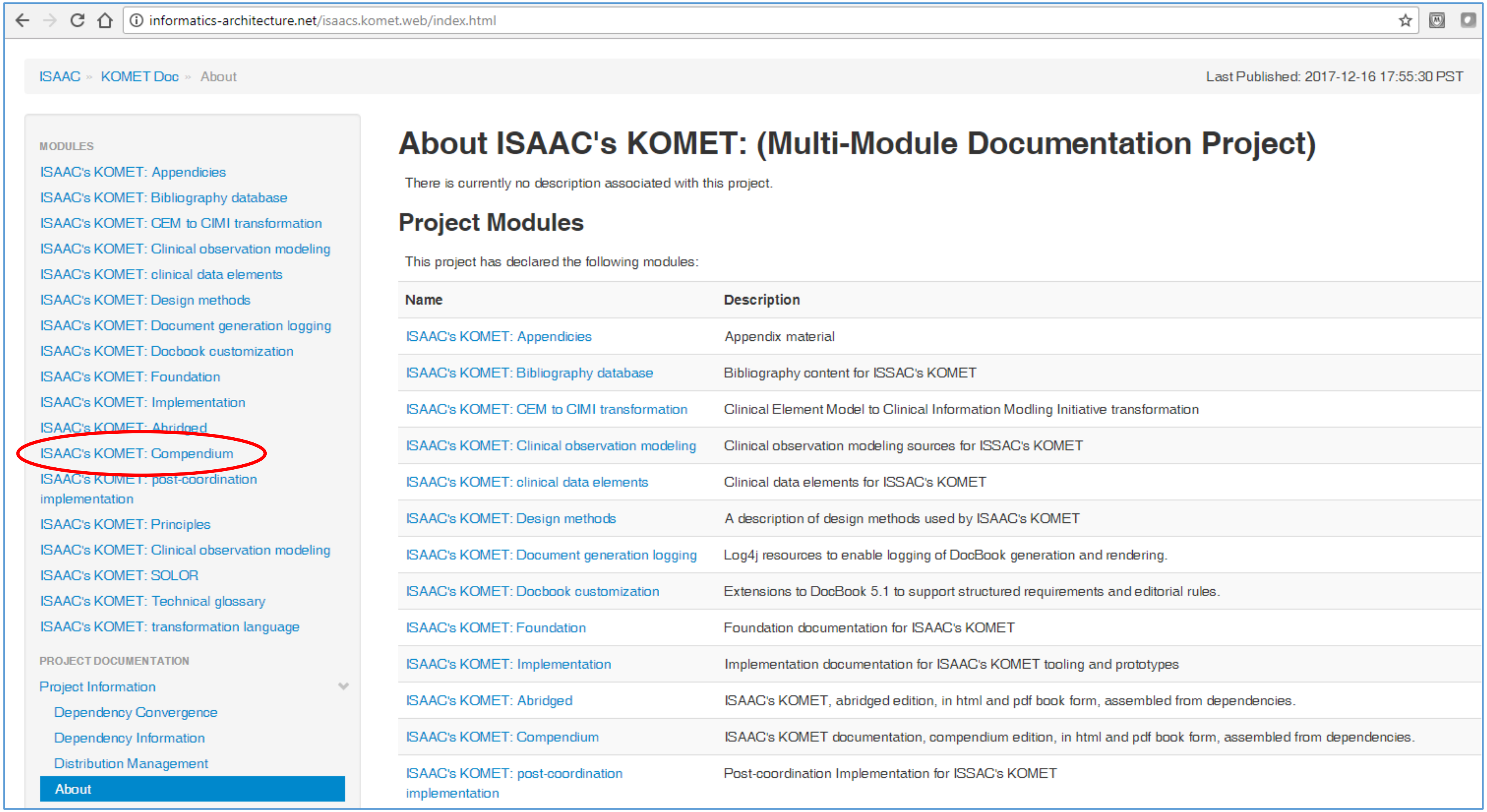


ISAAC » KOMET Doc » About

Last Published: 2017-12-16 17:55:30 PST

MODULES

- ISAAC's KOMET: Appendicies
- ISAAC's KOMET: Bibliography database
- ISAAC's KOMET: CEM to CIMI transformation
- ISAAC's KOMET: Clinical observation modeling
- ISAAC's KOMET: clinical data elements
- ISAAC's KOMET: Design methods
- ISAAC's KOMET: Document generation logging
- ISAAC's KOMET: Docbook customization
- ISAAC's KOMET: Foundation
- ISAAC's KOMET: Implementation
- ISAAC's KOMET: Abridged
- ISAAC's KOMET: Compendium
- ISAAC's KOMET: post-coordination implementation
- ISAAC's KOMET: Principles
- ISAAC's KOMET: Clinical observation modeling
- ISAAC's KOMET: SOLOR
- ISAAC's KOMET: Technical glossary
- ISAAC's KOMET: transformation language

PROJECT DOCUMENTATION

- Project Information
  - Dependency Convergence
  - Dependency Information
  - Distribution Management
  - About

About ISAAC's KOMET: (Multi-Module Documentation Project)

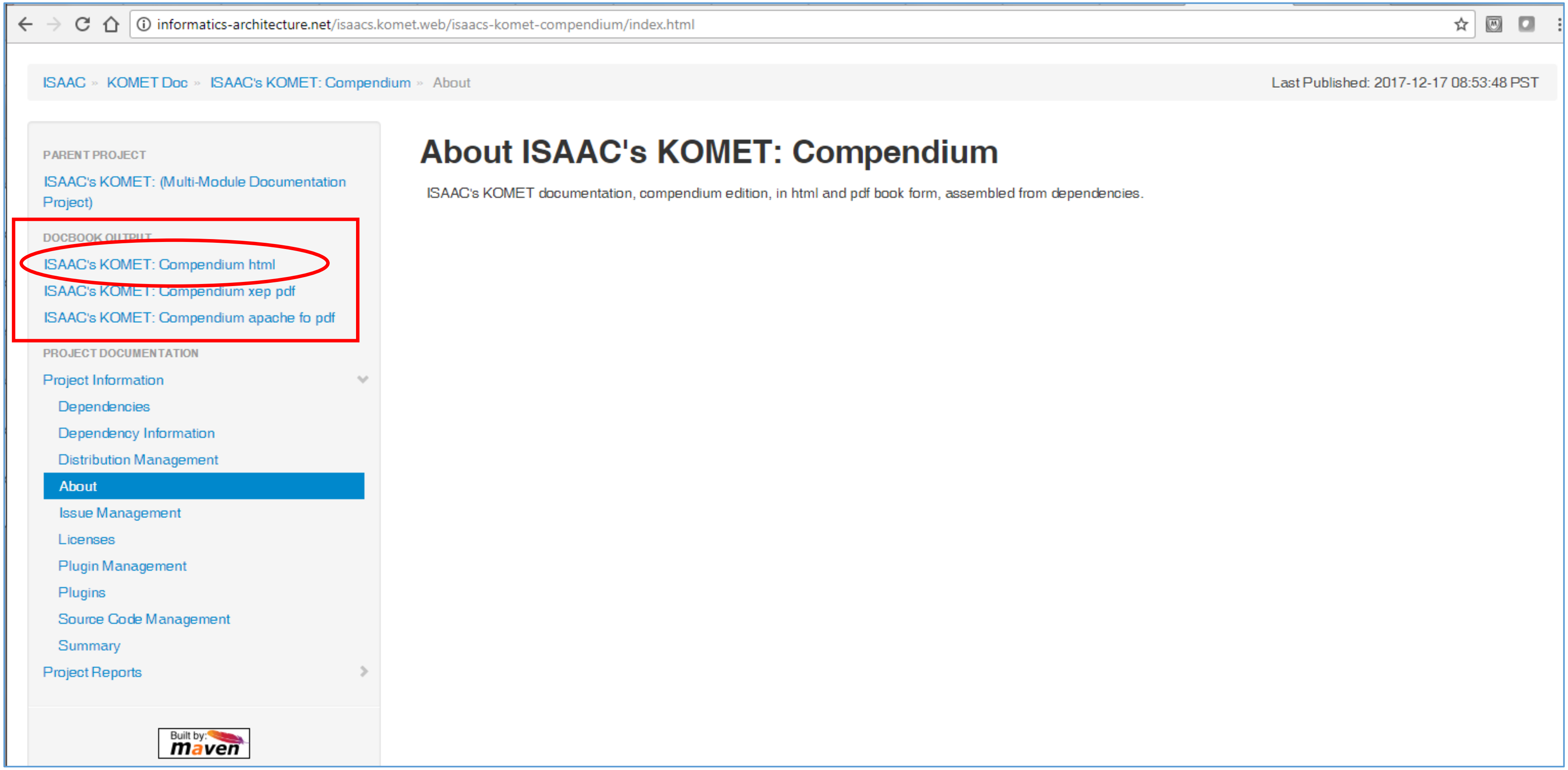
There is currently no description associated with this project.

Project Modules

This project has declared the following modules:

Name	Description
ISAAC's KOMET: Appendicies	Appendix material
ISAAC's KOMET: Bibliography database	Bibliography content for ISSAC's KOMET
ISAAC's KOMET: CEM to CIMI transformation	Clinical Element Model to Clinical Information Modling Initiative transformation
ISAAC's KOMET: Clinical observation modeling	Clinical observation modeling sources for ISSAC's KOMET
ISAAC's KOMET: clinical data elements	Clinical data elements for ISSAC's KOMET
ISAAC's KOMET: Design methods	A description of design methods used by ISAAC's KOMET
ISAAC's KOMET: Document generation logging	Log4j resources to enable logging of DocBook generation and rendering.
ISAAC's KOMET: Docbook customization	Extensions to DocBook 5.1 to support structured requirements and editorial rules.
ISAAC's KOMET: Foundation	Foundation documentation for ISAAC's KOMET
ISAAC's KOMET: Implementation	Implementation documentation for ISAAC's KOMET tooling and prototypes
ISAAC's KOMET: Abridged	ISAAC's KOMET, abridged edition, in html and pdf book form, assembled from dependencies.
ISAAC's KOMET: Compendium	ISAAC's KOMET documentation, compendium edition, in html and pdf book form, assembled from dependencies.
ISAAC's KOMET: post-coordination implementation	Post-coordination Implementation for ISSAC's KOMET

Informatics-architecture.net Web Site



informatics-architecture.net/isaacs.komet.web/isaacs-komet-compendium/index.html

ISAAC » KOMET Doc » ISAAC's KOMET: Compendium » About

Last Published: 2017-12-17 08:53:48 PST

PARENT PROJECT

ISAAC's KOMET: (Multi-Module Documentation Project)

DOCBOOK OUTPUT

- ISAAC's KOMET: Compendium html
- ISAAC's KOMET: Compendium xep pdf
- ISAAC's KOMET: Compendium apache fo pdf

PROJECT DOCUMENTATION

- Project Information
  - Dependencies
  - Dependency Information
  - Distribution Management
  - About
  - Issue Management
  - Licenses
  - Plugin Management
  - Plugins
  - Source Code Management
  - Summary
- Project Reports

Built by: maven

About ISAAC's KOMET: Compendium

ISAAC's KOMET documentation, compendium edition, in html and pdf book form, assembled from dependencies.

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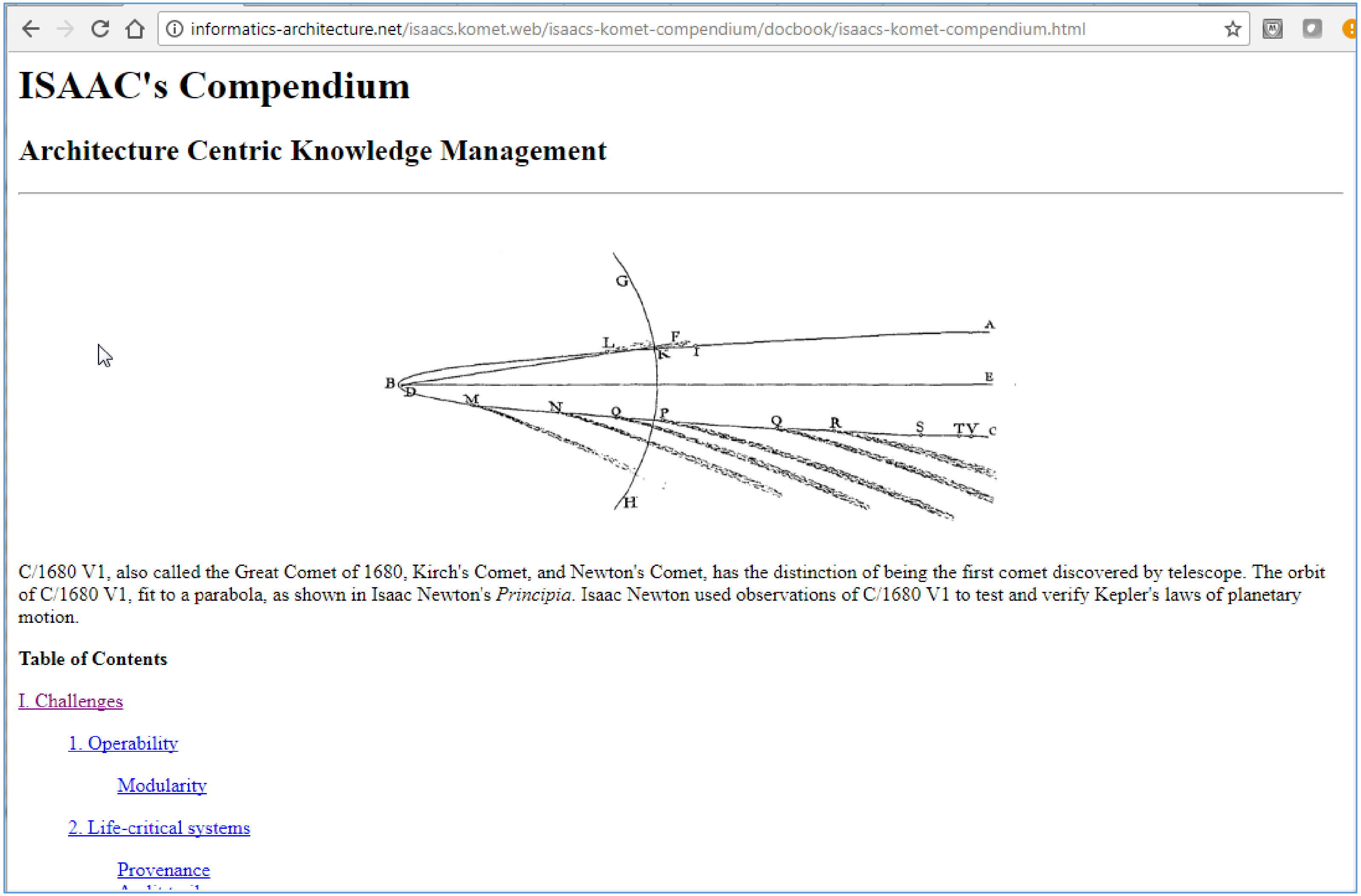

informatics-architecture.net/isaacs.komet.web/isaacs-komet-compendium/docbook/isaacs-komet-compendium.html
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ISAAC's Compendium

Architecture Centric Knowledge Management

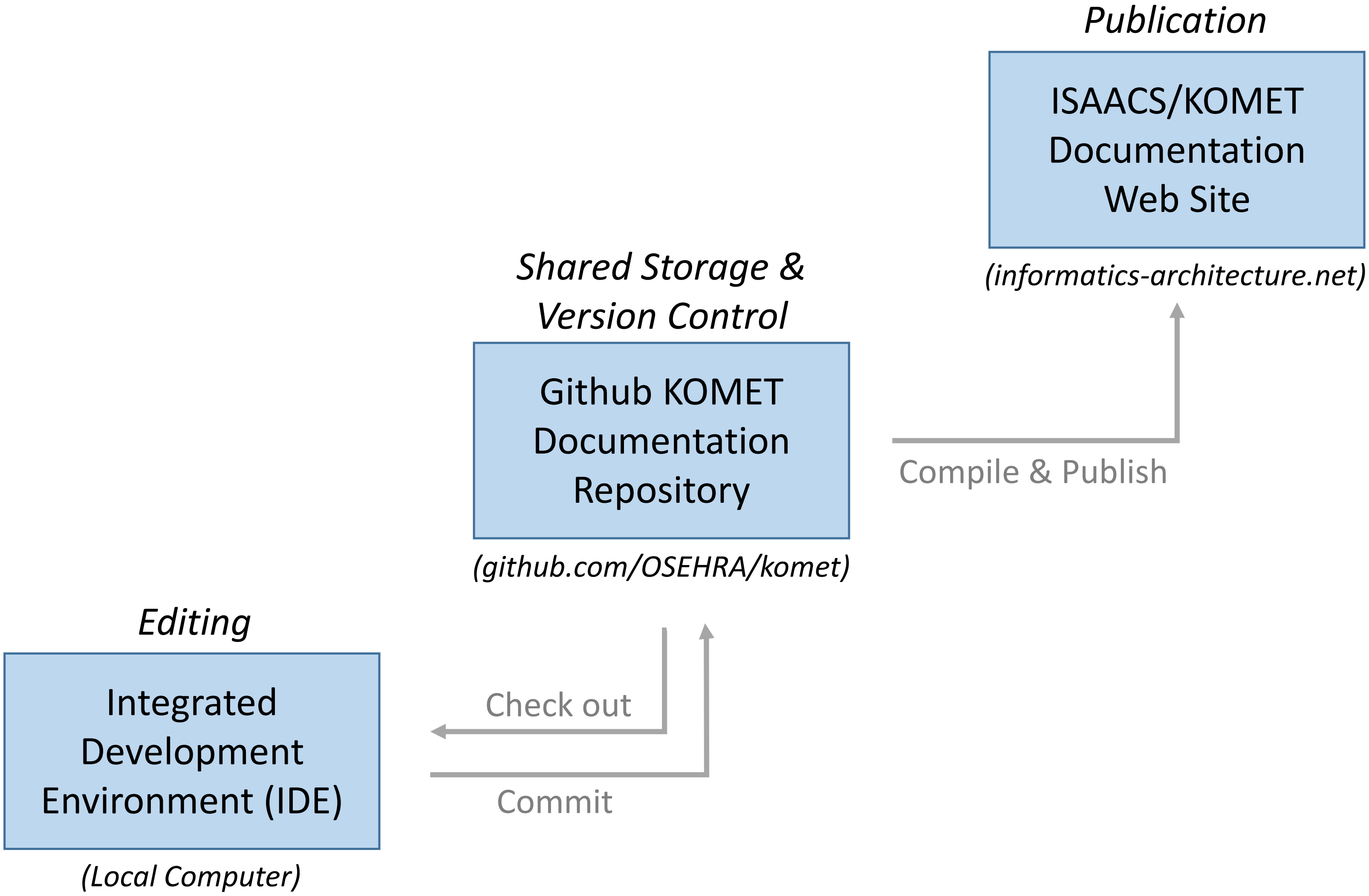
C/1680 V1, also called the Great Comet of 1680, Kirch's Comet, and Newton's Comet, has the distinction of being the first comet discovered by telescope. The orbit of C/1680 V1, fit to a parabola, as shown in Isaac Newton's *Principia*. Isaac Newton used observations of C/1680 V1 to test and verify Kepler's laws of planetary motion.

Table of Contents

I. Challenges

- 1. Operability
  - Modularity
- 2. Life-critical systems
  - Provenance

Management of Documentation Content



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Compile & Publish
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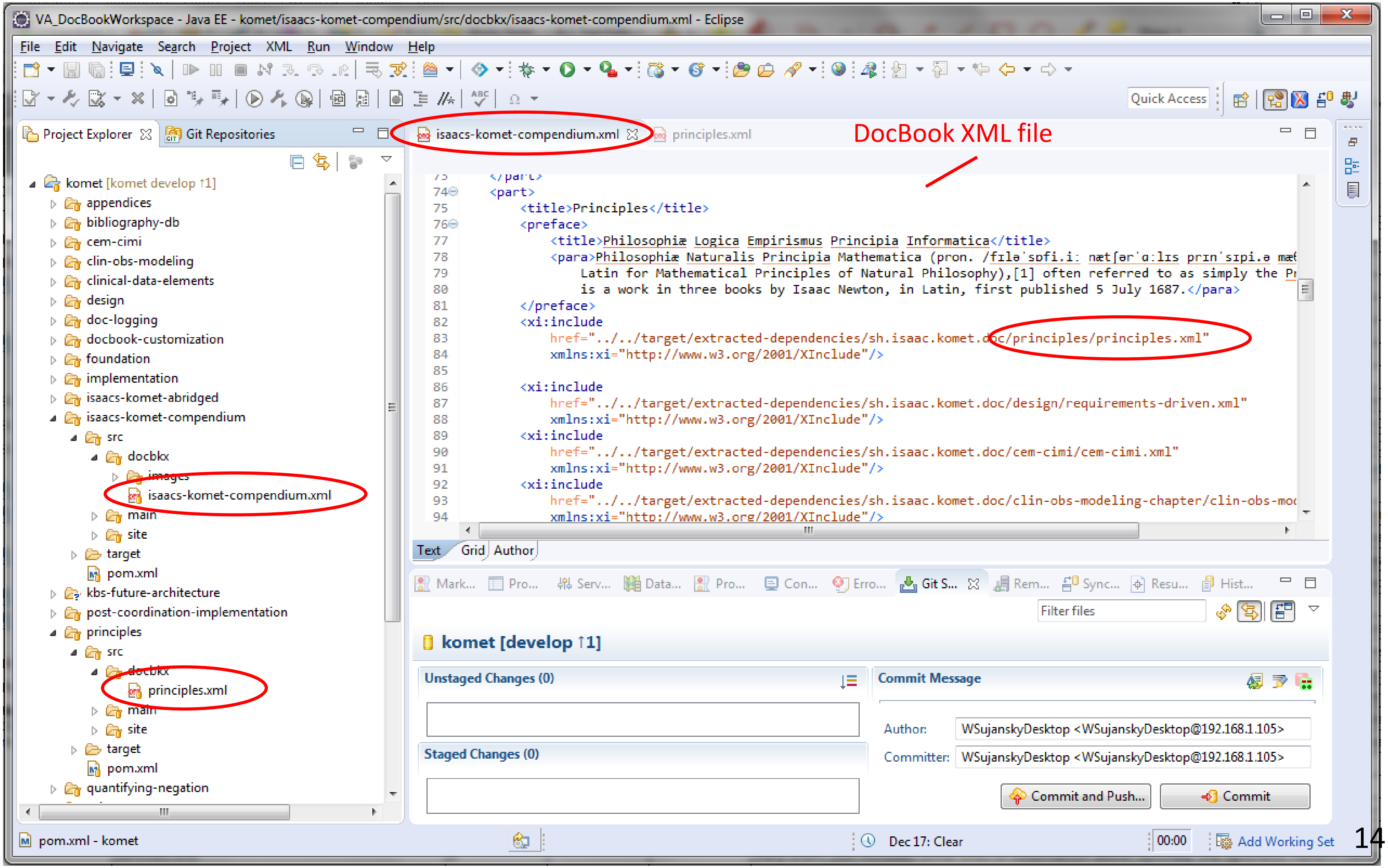
Commit

Integrated Development Environment (IDE)



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Add Working Set

DocBook XML file

- komet [komet develop ↑1]
  - appendices
  - bibliography-db
  - cem-cimi
  - clin-obs-modeling
  - clinical-data-elements
  - design
  - doc-logging
  - docbook-customization
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    - pom.xml
  - quantifying-negation

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komet [develop ↑1]

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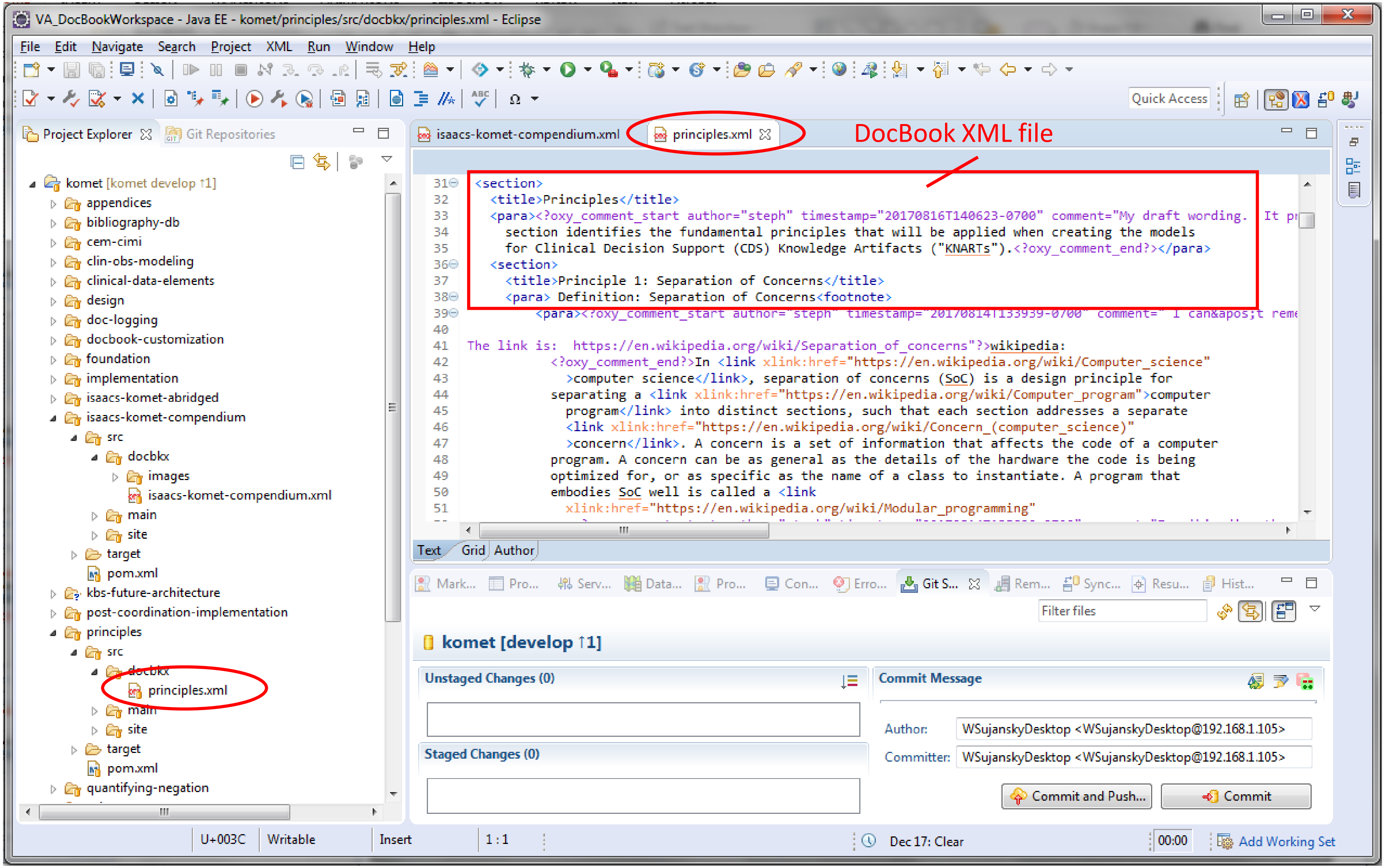

DocBook XML file

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            >computer science</link>, separation of concerns (SoC) is a design principle for
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            program</link> into distinct sections, such that each section addresses a separate
            <link xlink:href="https://en.wikipedia.org/wiki/Concern_(computer_science)"
            >concern</link>. A concern is a set of information that affects the code of a computer
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```

komet [develop ↑1]

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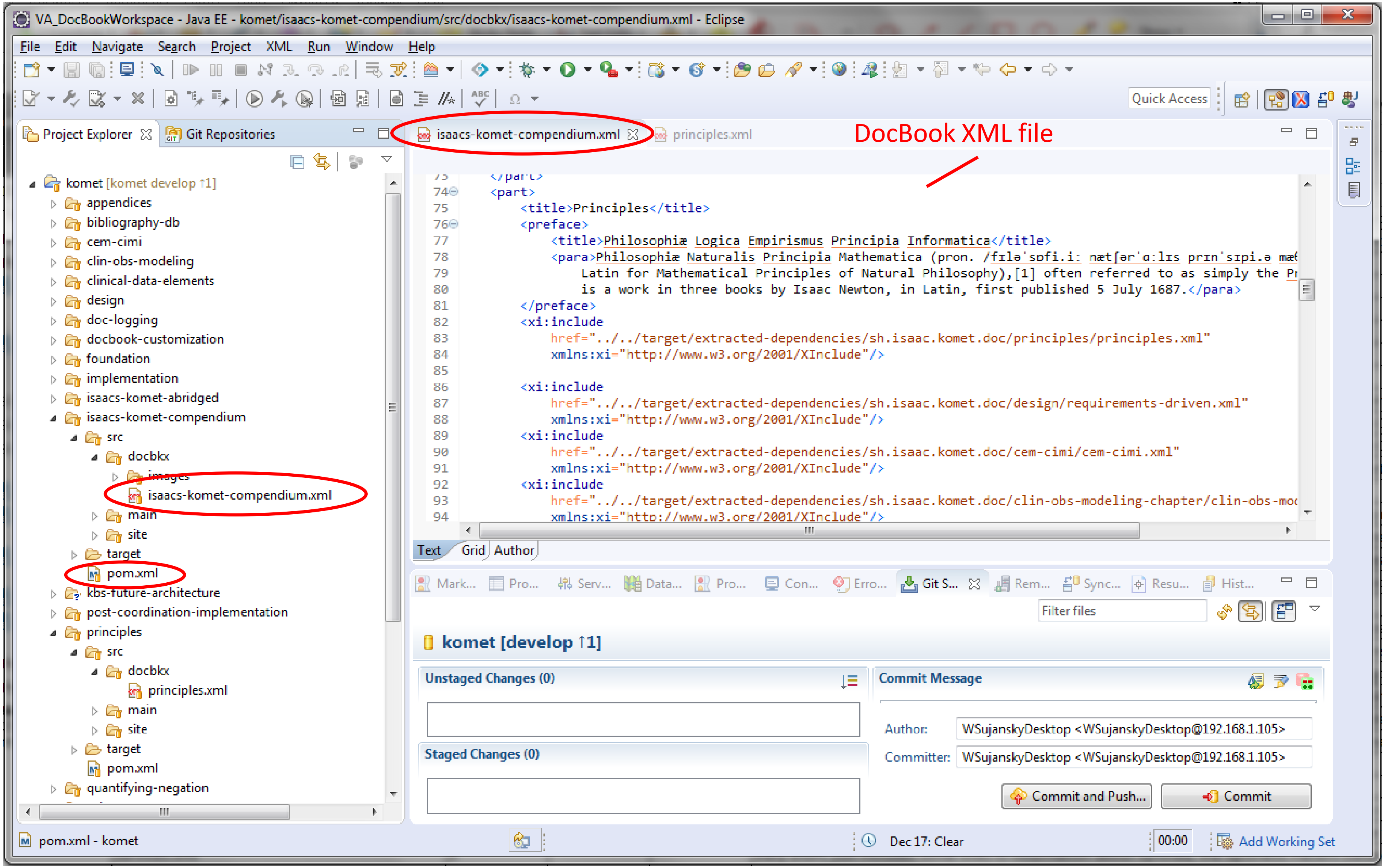

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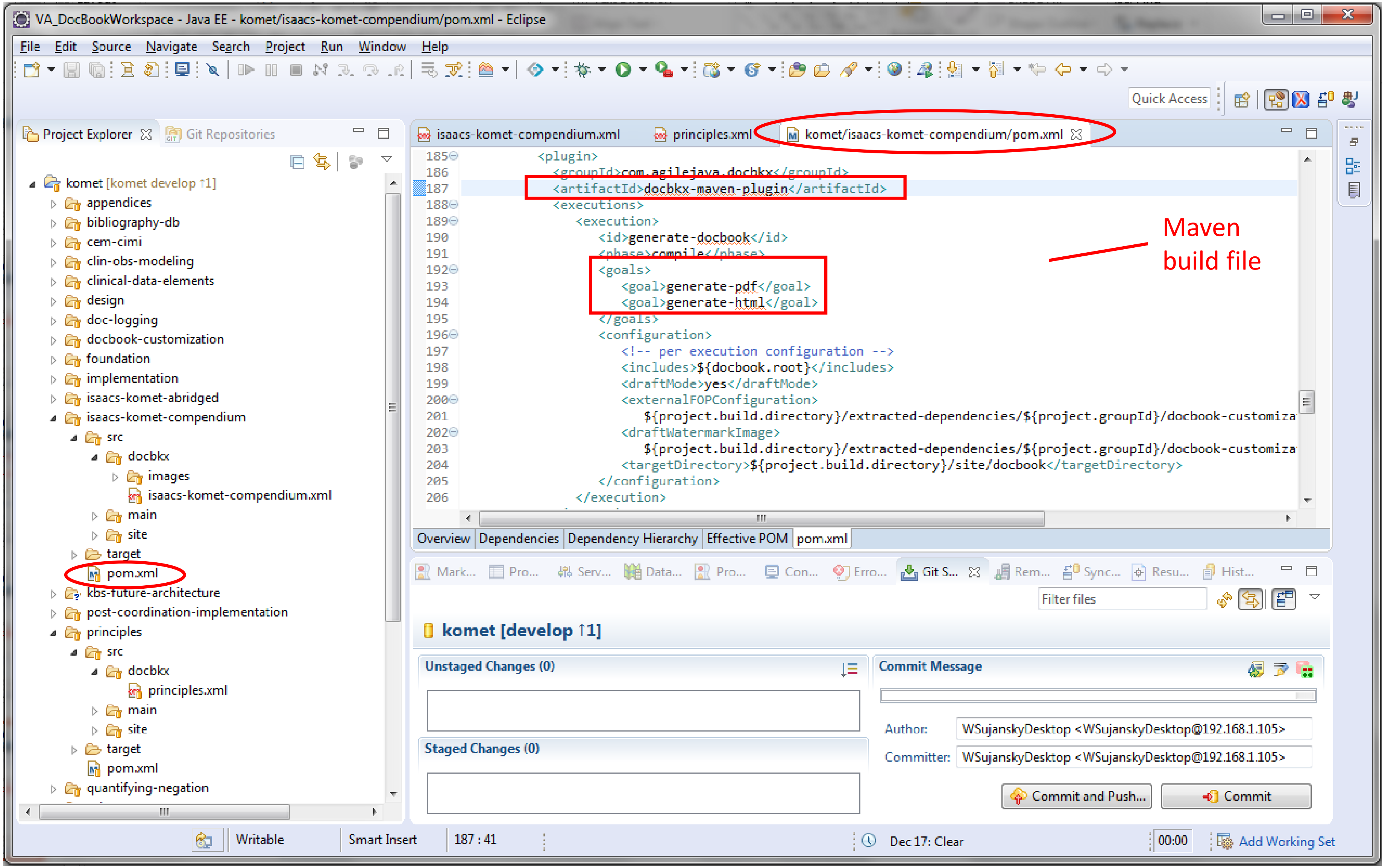

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        - isaacs-komet-compendium.xml
      - main
      - site
    - target
    - pom.xml
  - kbs-future-architecture
  - post-coordination-implementation
  - principles
    - src
      - docbkx
        - principles.xml
      - main
      - site
    - target
    - pom.xml
  - quantifying-negation

```
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  <groupId>com.agilejava.docbkx</groupId>
  <artifactId>docbkx-maven-plugin</artifactId>
  <executions>
     <execution>
        <id>generate-docbook</id>
        <phase>compile</phase>
        <goals>
           <goal>generate-pdf</goal>
           <goal>generate-html</goal>
        </goals>
        <configuration>
           <!-- per execution configuration -->
           <includes>${docbook.root}</includes>
           <draftMode>yes</draftMode>
           <externalFOPConfiguration>
              ${project.build.directory}/extracted-dependencies/${project.groupId}/docbook-customiza
           <draftWatermarkImage>
              ${project.build.directory}/extracted-dependencies/${project.groupId}/docbook-customiza
           <targetDirectory>${project.build.directory}/site/docbook</targetDirectory>
        </configuration>
     </execution>
```

Maven build file

Overview
Dependencies
Dependency Hierarchy
Effective POM
pom.xml
Mark...
Pro...
Serv...
Data...
Pro...
Con...
Erro...
Git S...
Rem...
Sync...
Resu...
Hist...
Filter files

komet [develop ↑1]

Unstaged Changes (0)

Staged Changes (0)

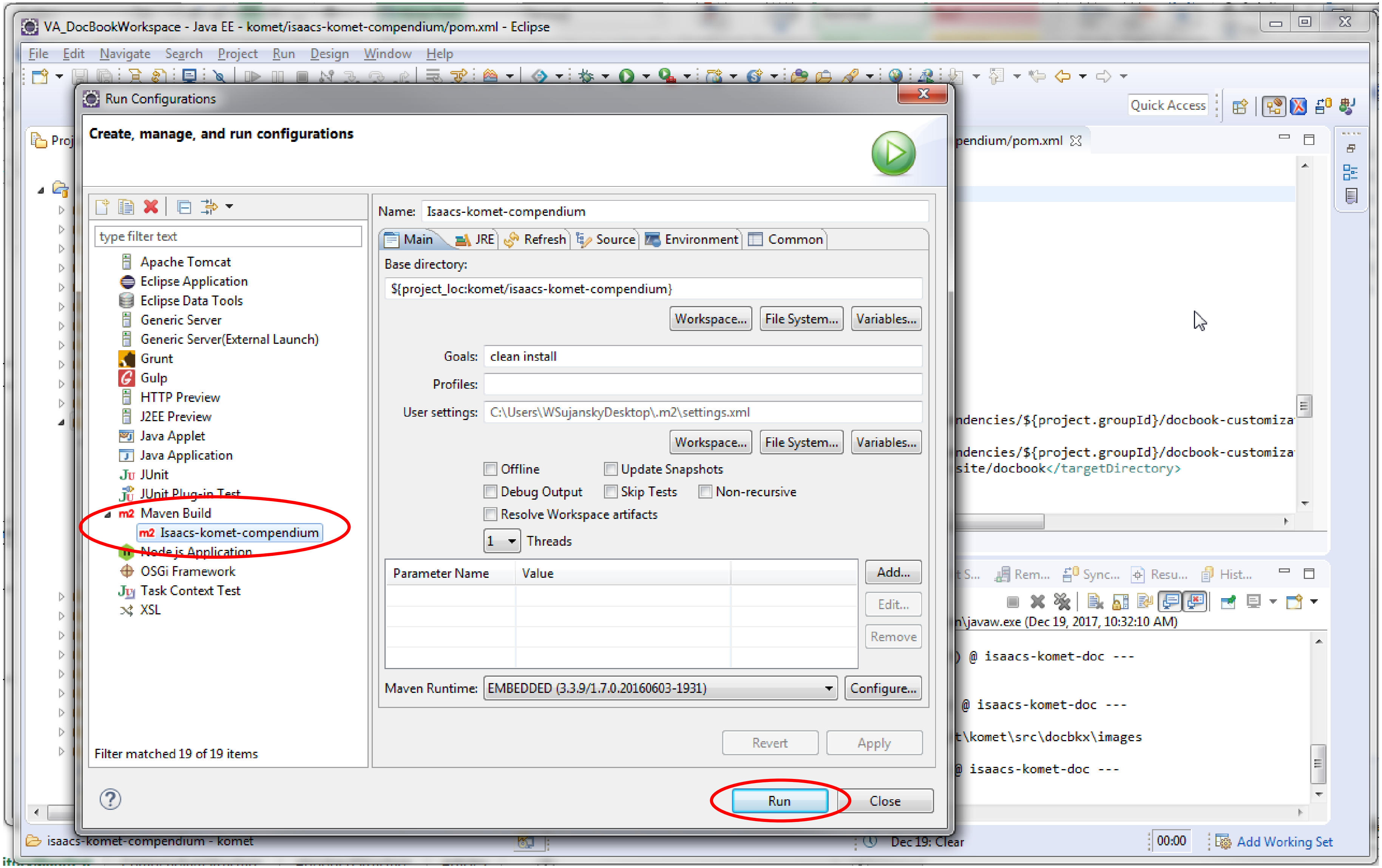
Commit Message

Author: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

Committer: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

Commit and Push...
Commit
Writable
Smart Insert
187 : 41
Dec 17: Clear
00:00
Add Working Set

Integrated Development Environment (IDE)



VA_DocBookWorkspace - Java EE - komet/isaacs-komet-compendium/pom.xml - Eclipse

Run Configurations

Create, manage, and run configurations

- Apache Tomcat
- Eclipse Application
- Eclipse Data Tools
- Generic Server
- Generic Server(External Launch)
- Grunt
- Gulp
- HTTP Preview
- J2EE Preview
- Java Applet
- Java Application
- JUnit
- JUnit Plug-in Test
- Maven Build
  - Isaacs-komet-compendium
- Node.js Application
- OSGi Framework
- Task Context Test
- XSL

Filter matched 19 of 19 items

Name: Isaacs-komet-compendium

Base directory: ${project_loc:komet/isaacs-komet-compendium}

Goals: clean install

Profiles:

User settings: C:\Users\WSujanskyDesktop\.m2\settings.xml

☐ Offline ☐ Update Snapshots

☐ Debug Output ☐ Skip Tests ☐ Non-recursive

☐ Resolve Workspace artifacts

1 Threads

Parameter Name	Value

Maven Runtime: EMBEDDED (3.3.9/1.7.0.20160603-1931)

```
ndencies/${project.groupId}/docbook-customiza
ndencies/${project.groupId}/docbook-customiza
site/docbook</targetDirectory>
```

```
n\javaw.exe (Dec 19, 2017, 10:32:10 AM)
) @ isaacs-komet-doc ---
 @ isaacs-komet-doc ---
t\komet\src\docbkx\images
@ isaacs-komet-doc ---
```

isaacs-komet-compendium - komet

Dec 19: Clear

00:00

File
Edit
Navigate
Search
Project
Run
Design
Window
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Proj
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Main
JRE
Refresh
Source
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Common
Workspace...
File System...
Variables...
Add...
Edit...
Remove
Configure...
Revert
Apply
Run
Close
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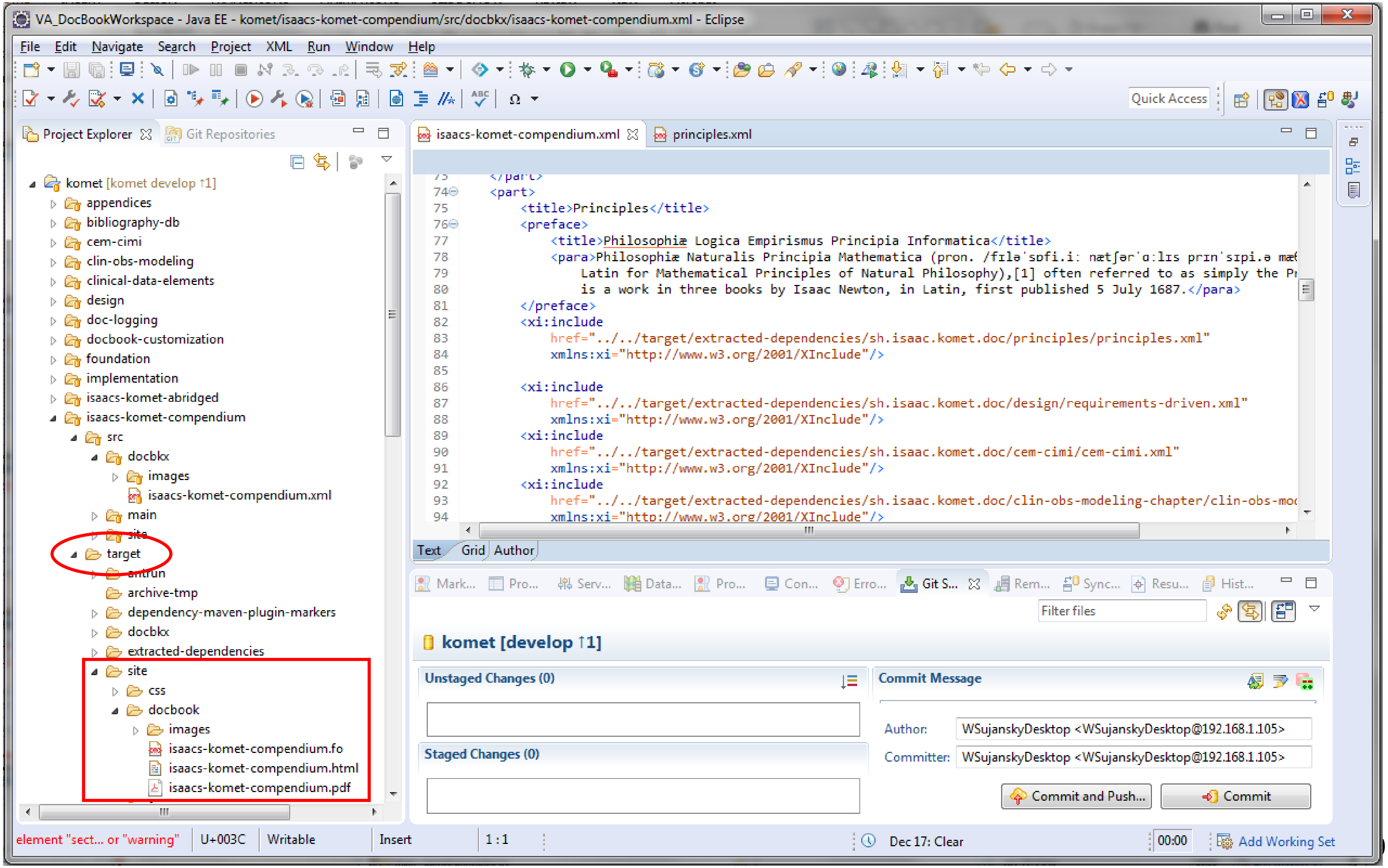
Sync...
Resu...
Hist...
Add Working Set

Background and Terminology



VA_DocBookWorkspace - Java EE - komet/isaacs-komet-compendium/src/docbkx/isaacs-komet-compendium.xml - Eclipse

File Edit Navigate Search Project XML Run Window Help
Quick Access
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Pro...
Serv...
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Pro...
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Hist...
Filter files
Commit and Push...
Commit

- komet [komet develop ↑1]
  - appendices
  - bibliography-db
  - cem-cimi
  - clin-obs-modeling
  - clinical-data-elements
  - design
  - doc-logging
  - docbook-customization
  - foundation
  - implementation
  - isaacs-komet-abridged
  - isaacs-komet-compendium
    - src
      - docbkx
        - images
        - isaacs-komet-compendium.xml
      - main
      - site
    - target
      - antrun
      - archive-tmp
      - dependency-maven-plugin-markers
      - docbkx
      - extracted-dependencies
      - site
        - css
        - docbook
          - images
          - isaacs-komet-compendium.fo
          - isaacs-komet-compendium.html
          - isaacs-komet-compendium.pdf

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            Latin for Mathematical Principles of Natural Philosophy),[1] often referred to as simply the Pr
            is a work in three books by Isaac Newton, in Latin, first published 5 July 1687.</para>
    </preface>
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        xmlns:xi="http://www.w3.org/2001/XInclude"/>
    <xi:include
        href="../../target/extracted-dependencies/sh.isaac.komet.doc/clin-obs-modeling-chapter/clin-obs-mod
        xmlns:xi="http://www.w3.org/2001/XInclude"/>
```

komet [develop ↑1]

Unstaged Changes (0)

Staged Changes (0)

Commit Message

Author: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

Committer: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

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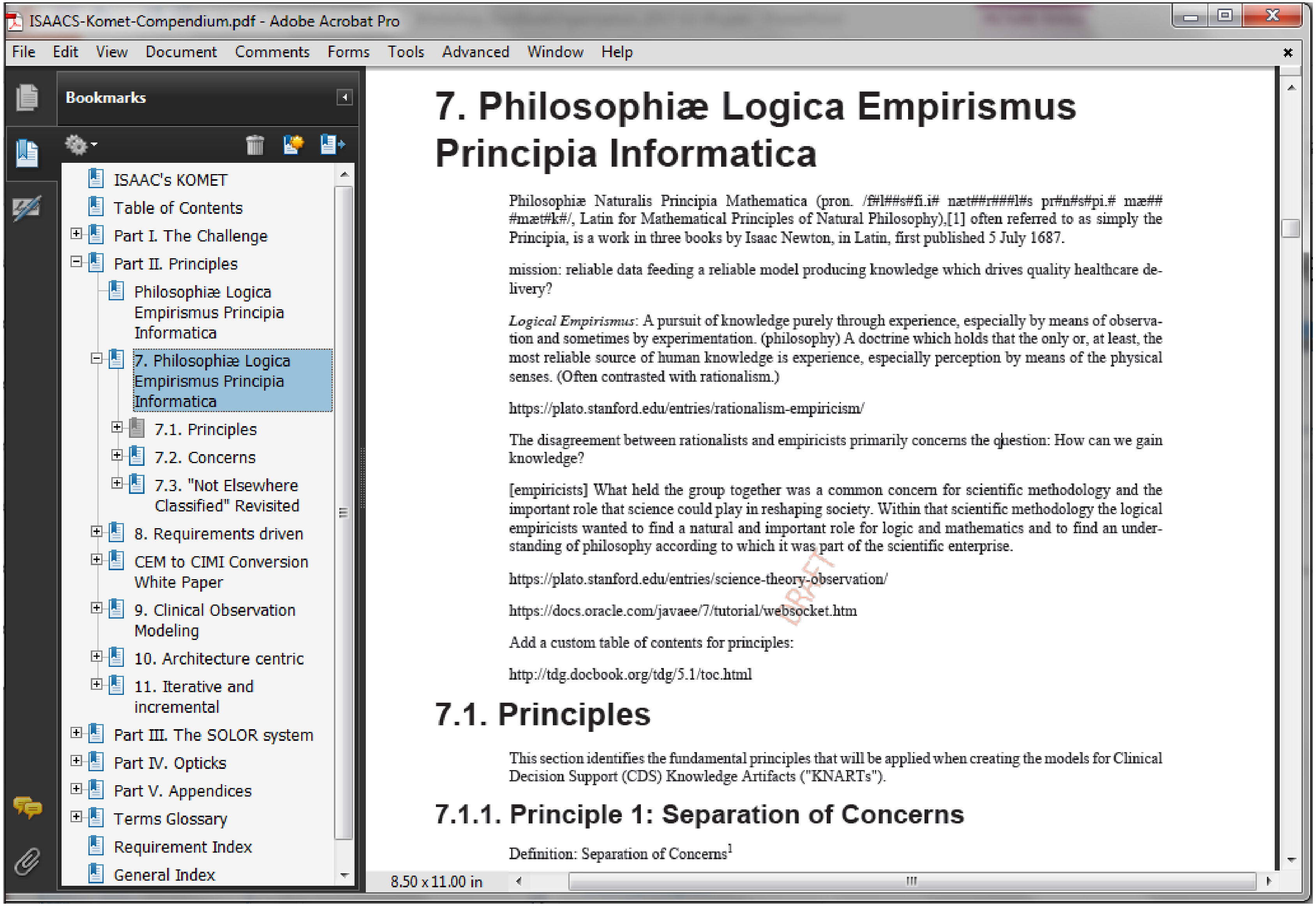
Pdf Output - Compendium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Requirement Index
General Index
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7. Philosophiæ Logica Empirismus Principia Informatica

Philosophiæ Naturalis Principia Mathematica (pron. /f#l##s#fi.i# næt##r###l#s pr#n#s#pi.# mæ## #mæt#k#/, Latin for Mathematical Principles of Natural Philosophy),[1] often referred to as simply the Principia, is a work in three books by Isaac Newton, in Latin, first published 5 July 1687.

mission: reliable data feeding a reliable model producing knowledge which drives quality healthcare delivery?

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DRAFT

https://plato.stanford.edu/entries/science-theory-observation/

https://docs.oracle.com/javaee/7/tutorial/websocket.htm

Add a custom table of contents for principles:

http://tdg.docbook.org/tdg/5.1/toc.html

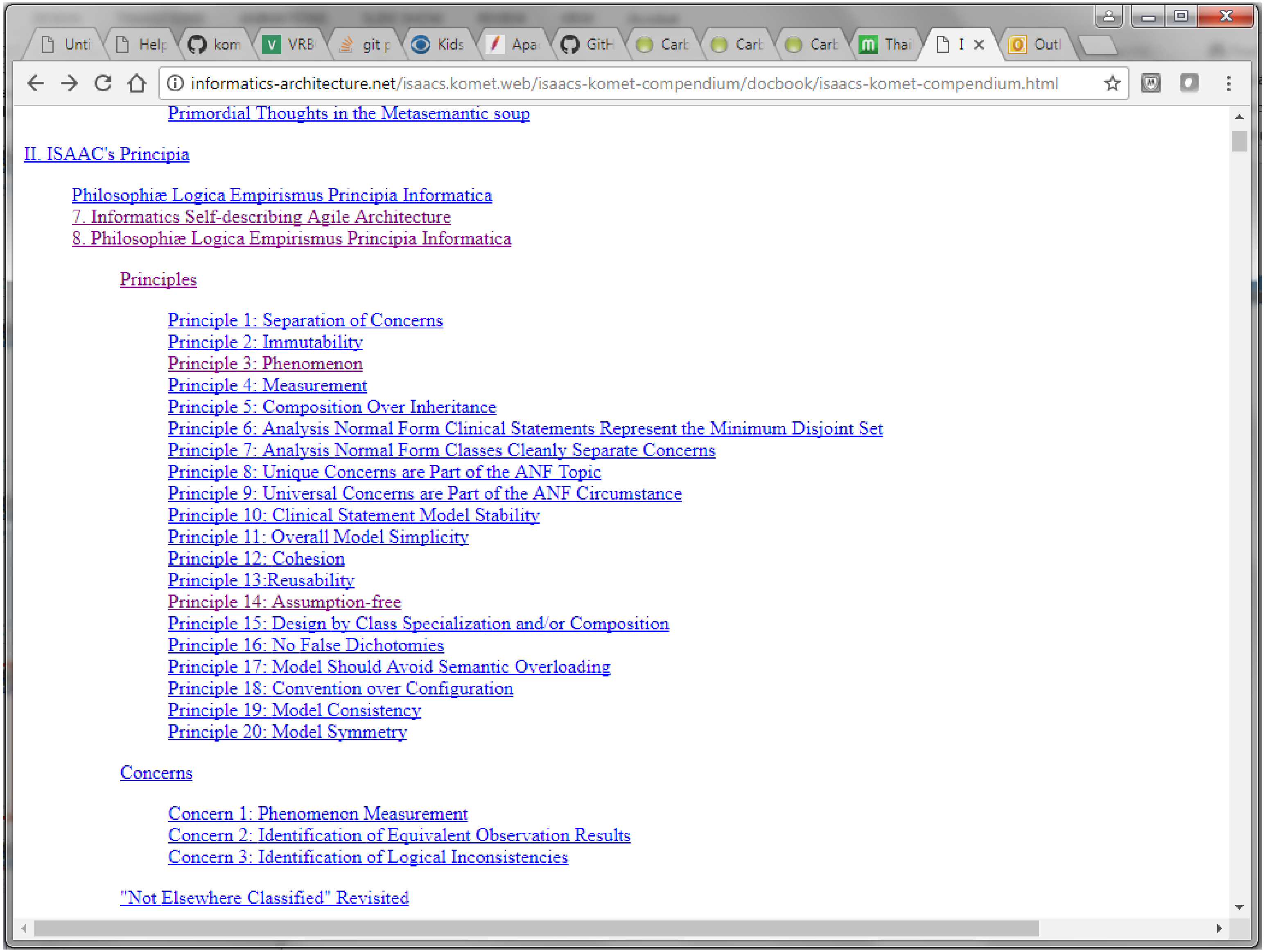
7.1. Principles

This section identifies the fundamental principles that will be applied when creating the models for Clinical Decision Support (CDS) Knowledge Artifacts ("KNARTs").

7.1.1. Principle 1: Separation of Concerns

Definition: Separation of Concerns[1]

Html Output - Compendium



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Primordial Thoughts in the Metasemantic soup

II. ISAAC's Principia

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- 7. Informatics Self-describing Agile Architecture
- 8. Philosophiæ Logica Empirismus Principia Informatica
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    - Principle 7: Analysis Normal Form Classes Cleanly Separate Concerns
    - Principle 8: Unique Concerns are Part of the ANF Topic
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    - Principle 10: Clinical Statement Model Stability
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    - Concern 3: Identification of Logical Inconsistencies
  - "Not Elsewhere Classified" Revisited

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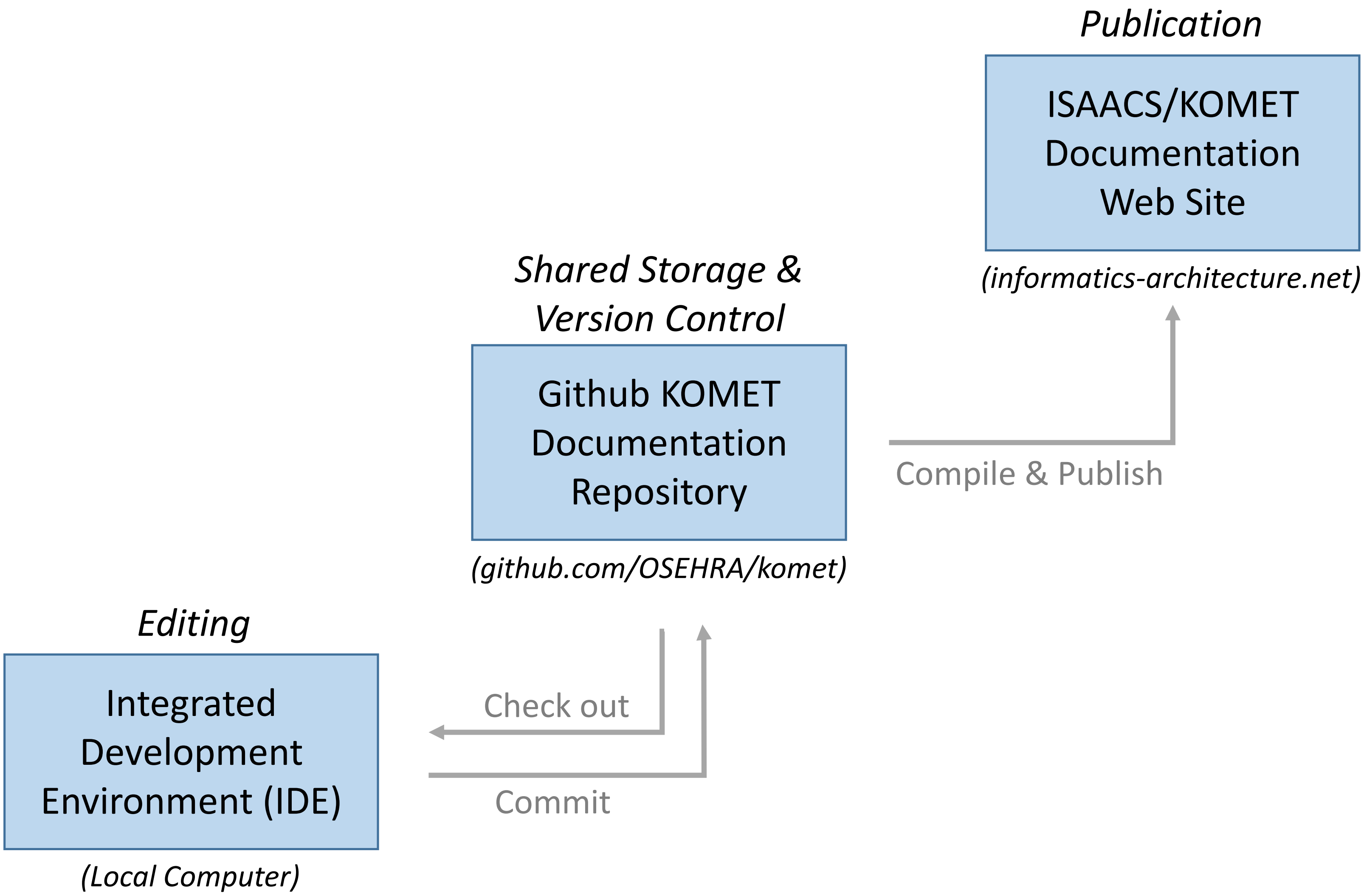


Publication

ISAACS/KOMET Documentation Web Site

(informatics-architecture.net)

Shared Storage & Version Control

Github KOMET Documentation Repository

(github.com/OSEHRA/komet)

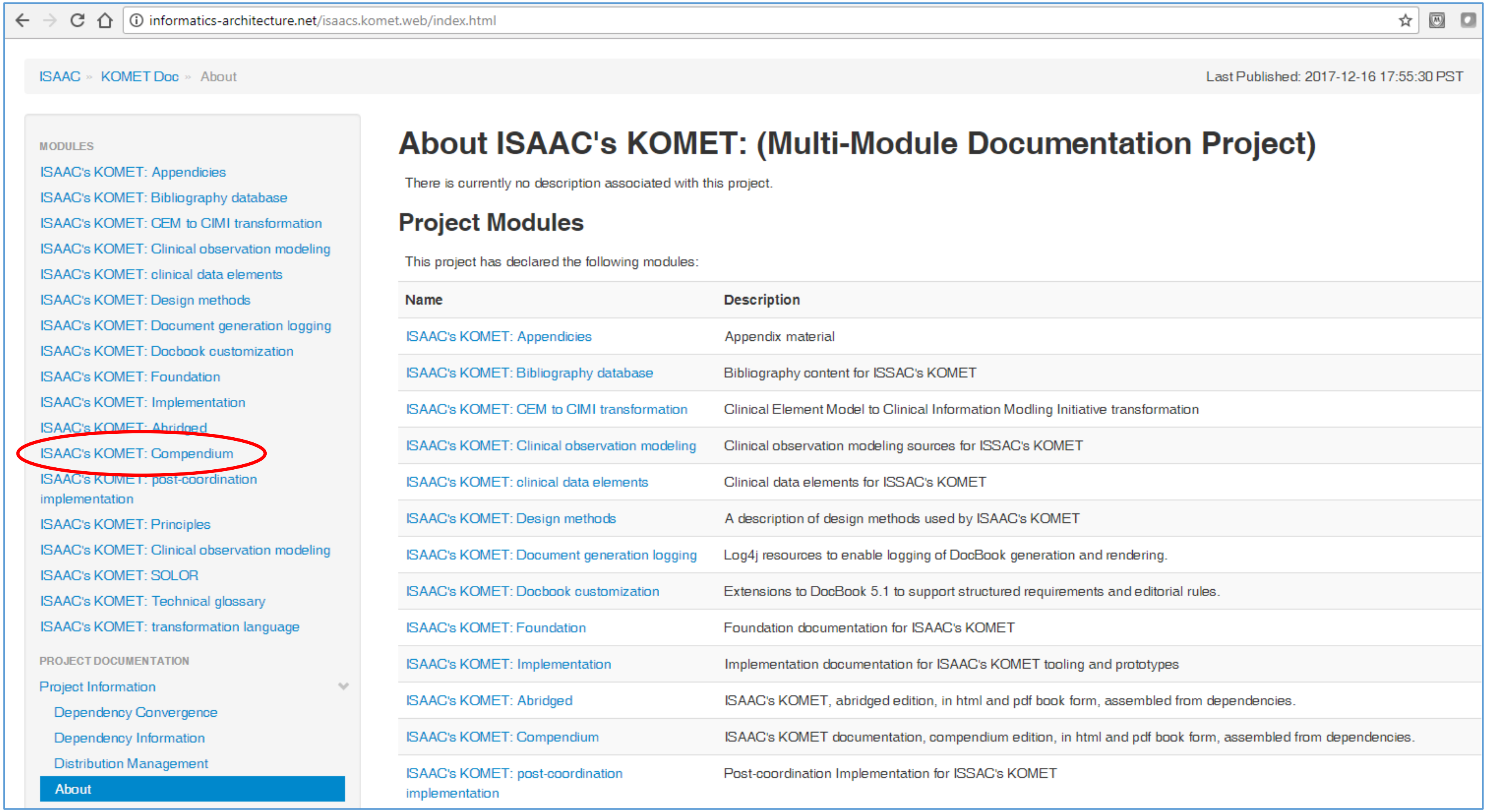
Editing

Integrated Development Environment (IDE)

(Local Computer)

Compile & Publish
Check out
Commit

Informatics-architecture.net Web Site



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MODULES

- ISAAC's KOMET: Appendicies
- ISAAC's KOMET: Bibliography database
- ISAAC's KOMET: CEM to CIMI transformation
- ISAAC's KOMET: Clinical observation modeling
- ISAAC's KOMET: clinical data elements
- ISAAC's KOMET: Design methods
- ISAAC's KOMET: Document generation logging
- ISAAC's KOMET: Docbook customization
- ISAAC's KOMET: Foundation
- ISAAC's KOMET: Implementation
- ISAAC's KOMET: Abridged
- ISAAC's KOMET: Compendium
- ISAAC's KOMET: post-coordination implementation
- ISAAC's KOMET: Principles
- ISAAC's KOMET: Clinical observation modeling
- ISAAC's KOMET: SOLOR
- ISAAC's KOMET: Technical glossary
- ISAAC's KOMET: transformation language

PROJECT DOCUMENTATION

- Project Information
  - Dependency Convergence
  - Dependency Information
  - Distribution Management
  - About

About ISAAC's KOMET: (Multi-Module Documentation Project)

There is currently no description associated with this project.

Project Modules

This project has declared the following modules:

Name	Description
ISAAC's KOMET: Appendicies	Appendix material
ISAAC's KOMET: Bibliography database	Bibliography content for ISSAC's KOMET
ISAAC's KOMET: CEM to CIMI transformation	Clinical Element Model to Clinical Information Modling Initiative transformation
ISAAC's KOMET: Clinical observation modeling	Clinical observation modeling sources for ISSAC's KOMET
ISAAC's KOMET: clinical data elements	Clinical data elements for ISSAC's KOMET
ISAAC's KOMET: Design methods	A description of design methods used by ISAAC's KOMET
ISAAC's KOMET: Document generation logging	Log4j resources to enable logging of DocBook generation and rendering.
ISAAC's KOMET: Docbook customization	Extensions to DocBook 5.1 to support structured requirements and editorial rules.
ISAAC's KOMET: Foundation	Foundation documentation for ISAAC's KOMET
ISAAC's KOMET: Implementation	Implementation documentation for ISAAC's KOMET tooling and prototypes
ISAAC's KOMET: Abridged	ISAAC's KOMET, abridged edition, in html and pdf book form, assembled from dependencies.
ISAAC's KOMET: Compendium	ISAAC's KOMET documentation, compendium edition, in html and pdf book form, assembled from dependencies.
ISAAC's KOMET: post-coordination implementation	Post-coordination Implementation for ISSAC's KOMET

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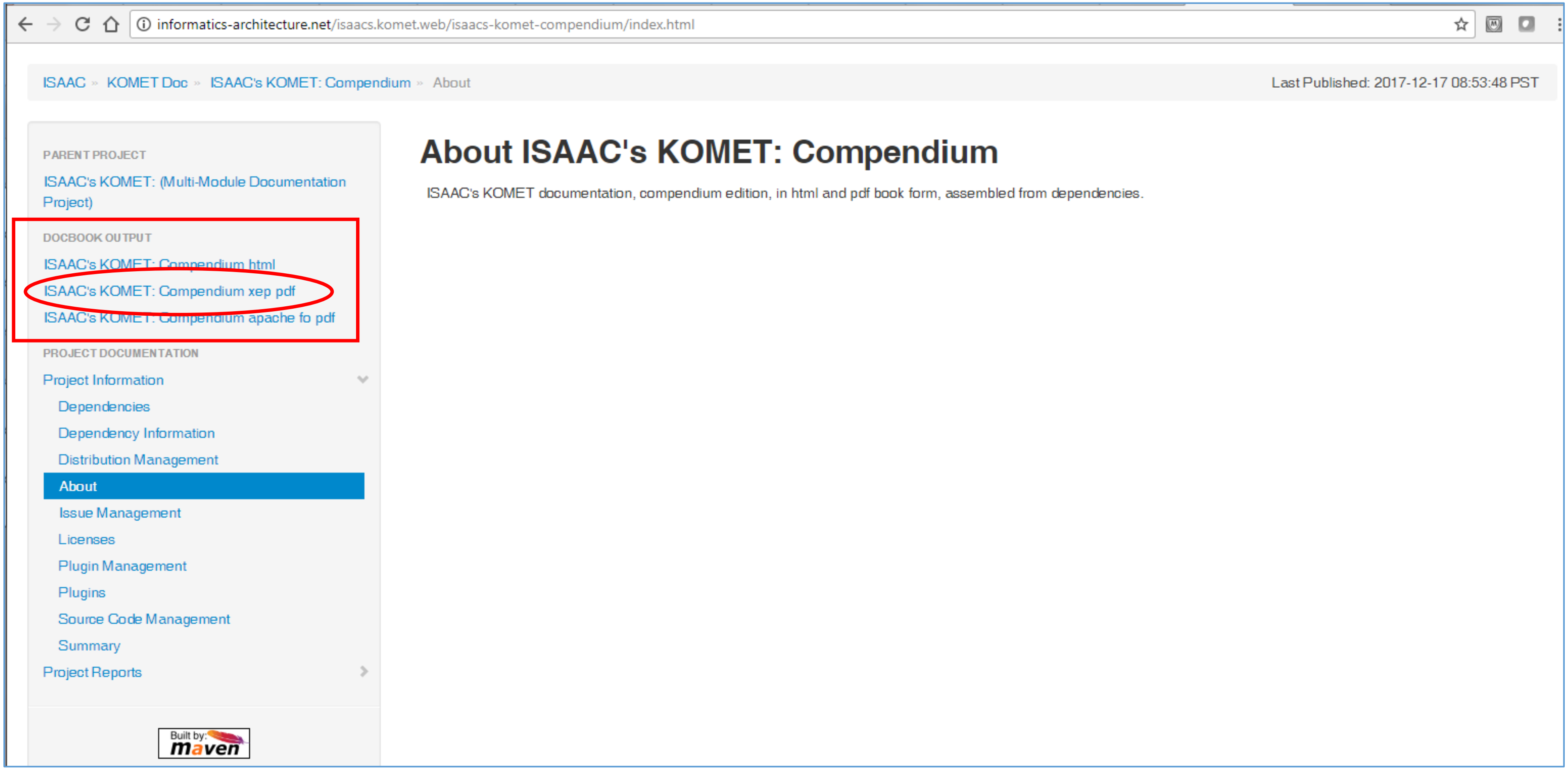

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PARENT PROJECT

ISAAC's KOMET: (Multi-Module Documentation Project)

DOCBOOK OUTPUT

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ISAAC's KOMET: Compendium apache fo pdf

PROJECT DOCUMENTATION

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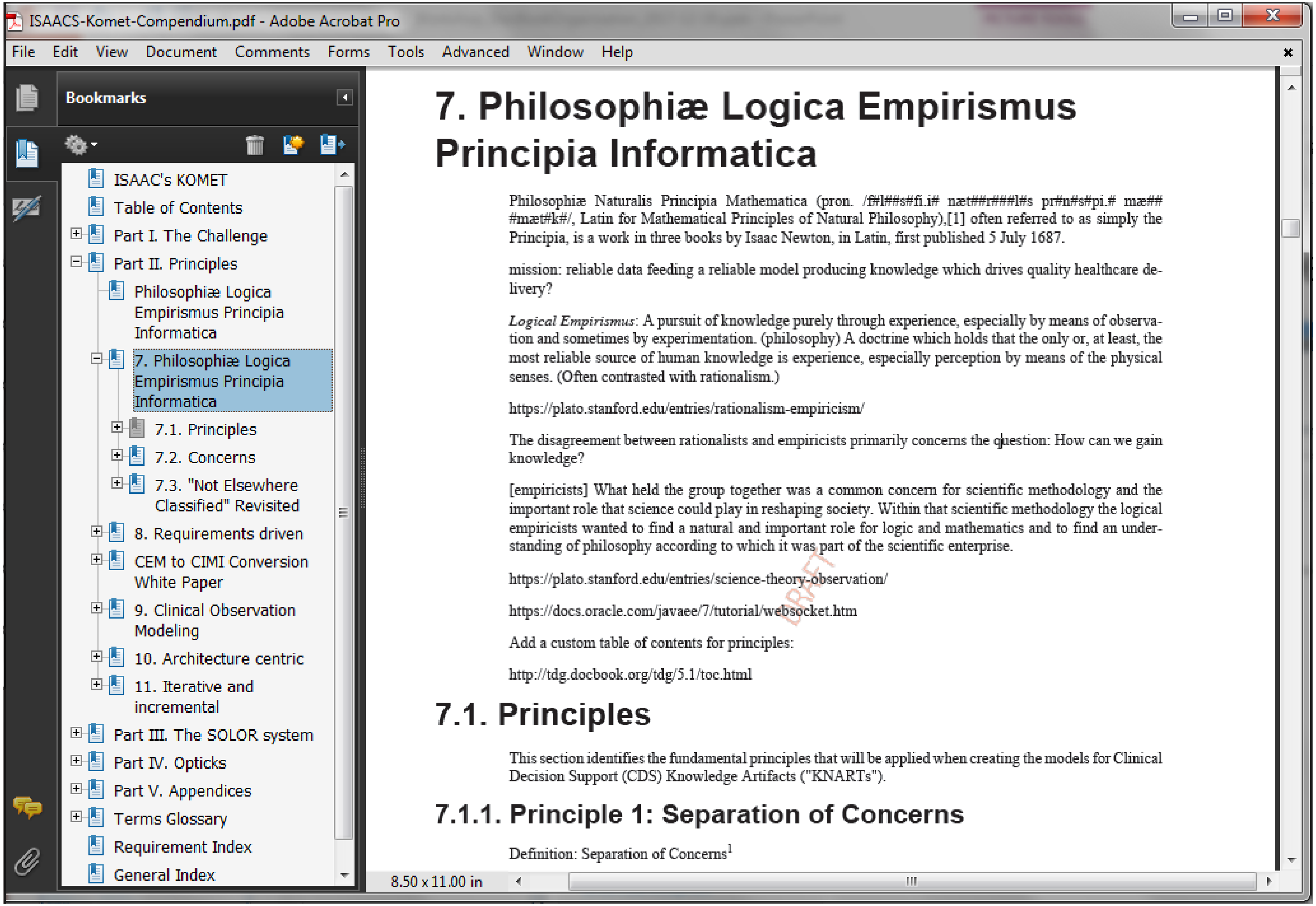
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General Index
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7. Philosophiæ Logica Empirismus Principia Informatica

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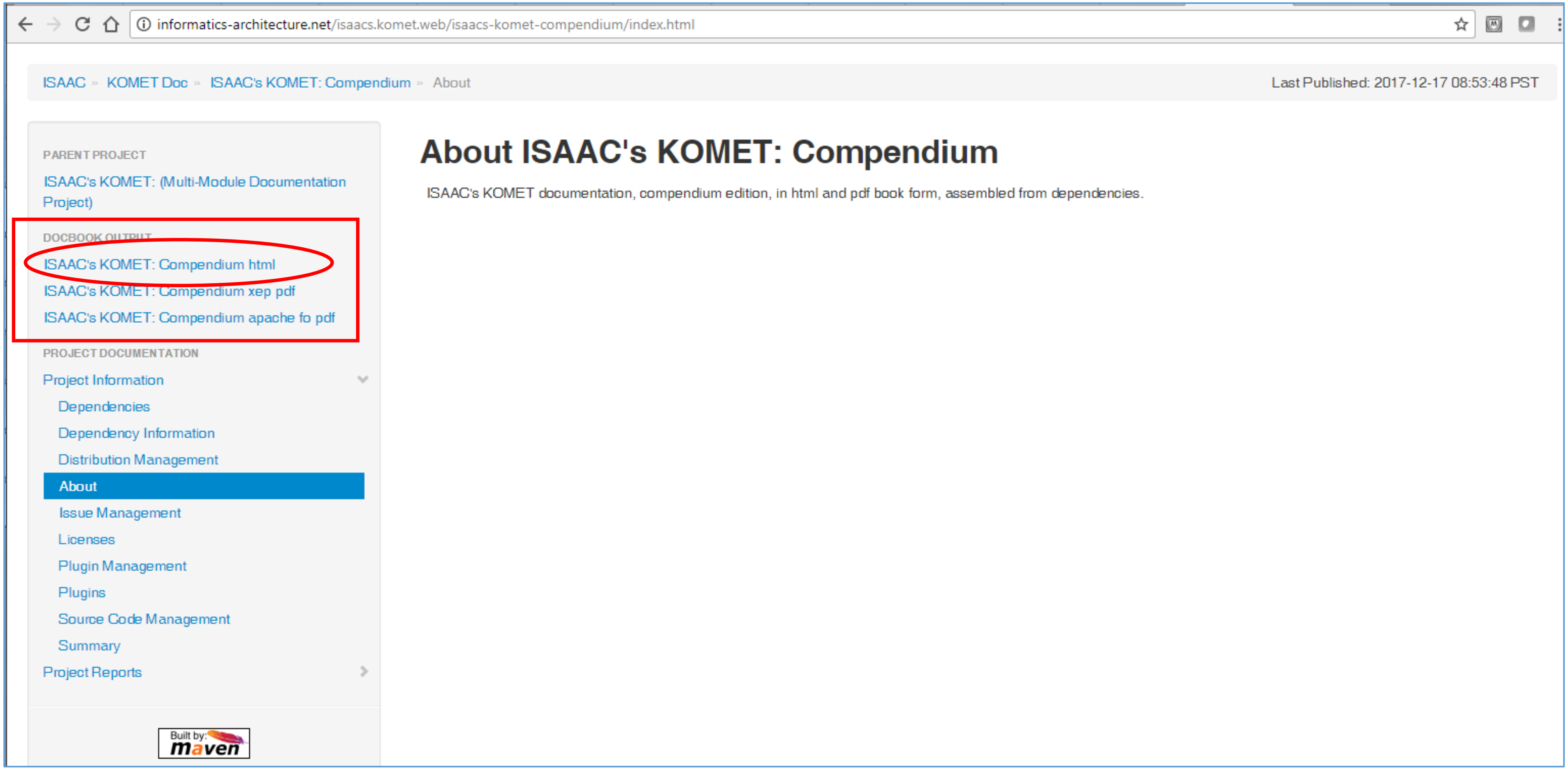

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PARENT PROJECT

ISAAC's KOMET: (Multi-Module Documentation Project)

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- ISAAC's KOMET: Compendium xep pdf
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PROJECT DOCUMENTATION

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  - Licenses
  - Plugin Management
  - Plugins
  - Source Code Management
  - Summary
- Project Reports

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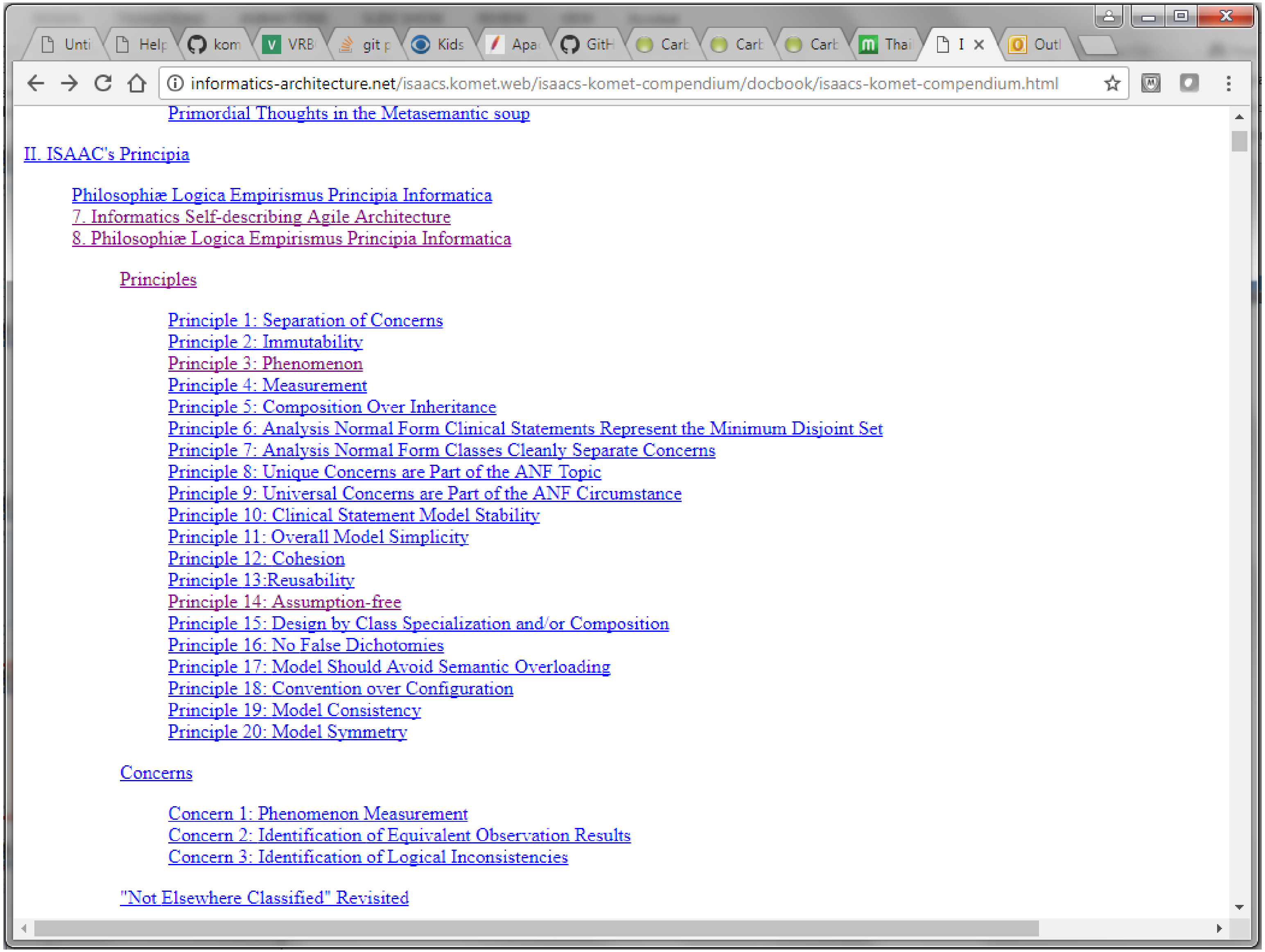

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Primordial Thoughts in the Metasemantic soup

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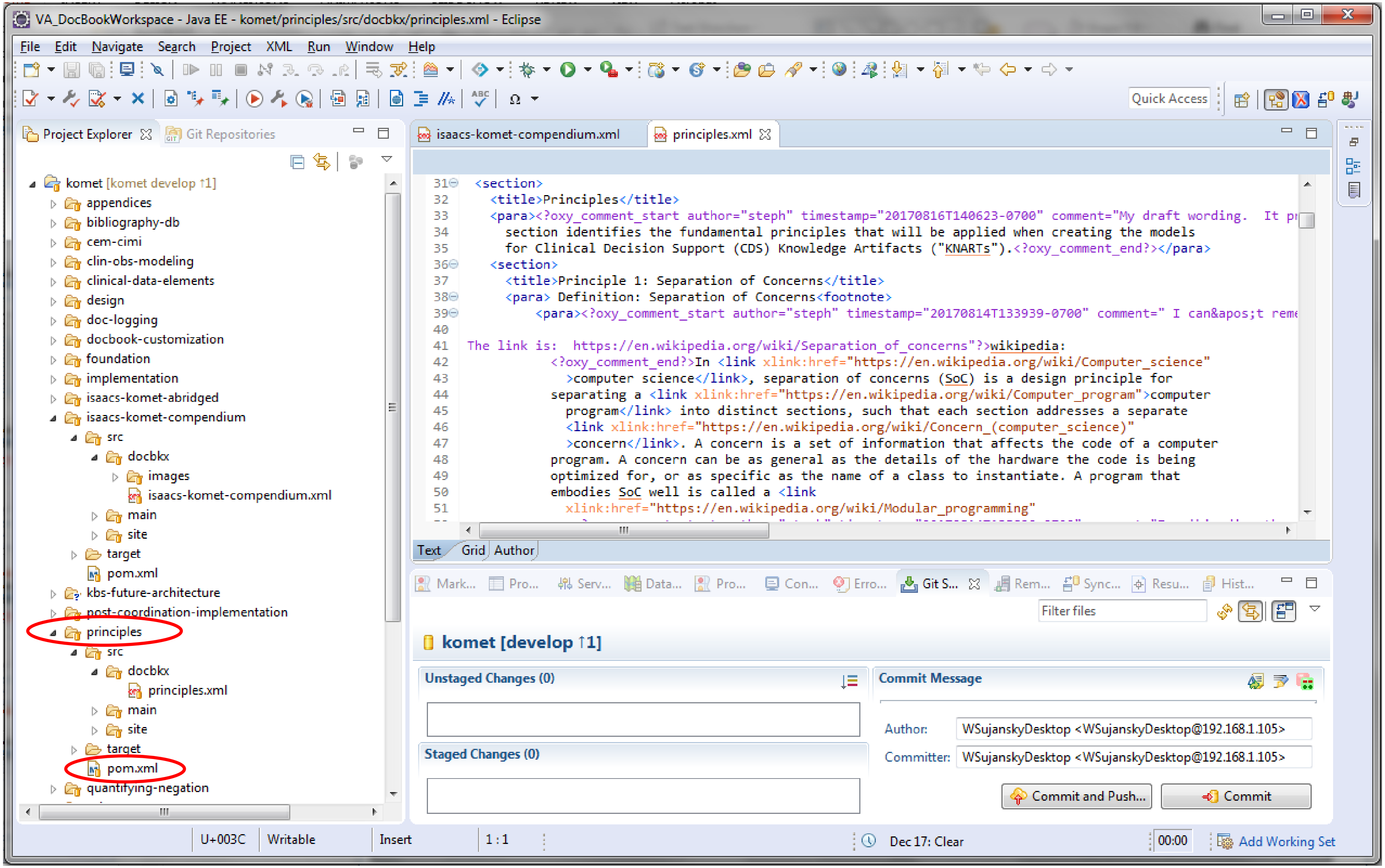
    - Concern 1: Phenomenon Measurement
    - Concern 2: Identification of Equivalent Observation Results
    - Concern 3: Identification of Logical Inconsistencies
  - "Not Elsewhere Classified" Revisited

Integrated Development Environment (IDE)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clin-obs-modeling
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docbook-customization
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Sync...
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Filter files
komet [develop ↑1]
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Staged Changes (0)
Commit Message
Commit and Push...
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00:00
Add Working Set

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            <link xlink:href="https://en.wikipedia.org/wiki/Concern_(computer_science)"
            >concern</link>. A concern is a set of information that affects the code of a computer
          program. A concern can be as general as the details of the hardware the code is being
          optimized for, or as specific as the name of a class to instantiate. A program that
          embodies SoC well is called a <link
            xlink:href="https://en.wikipedia.org/wiki/Modular_programming"
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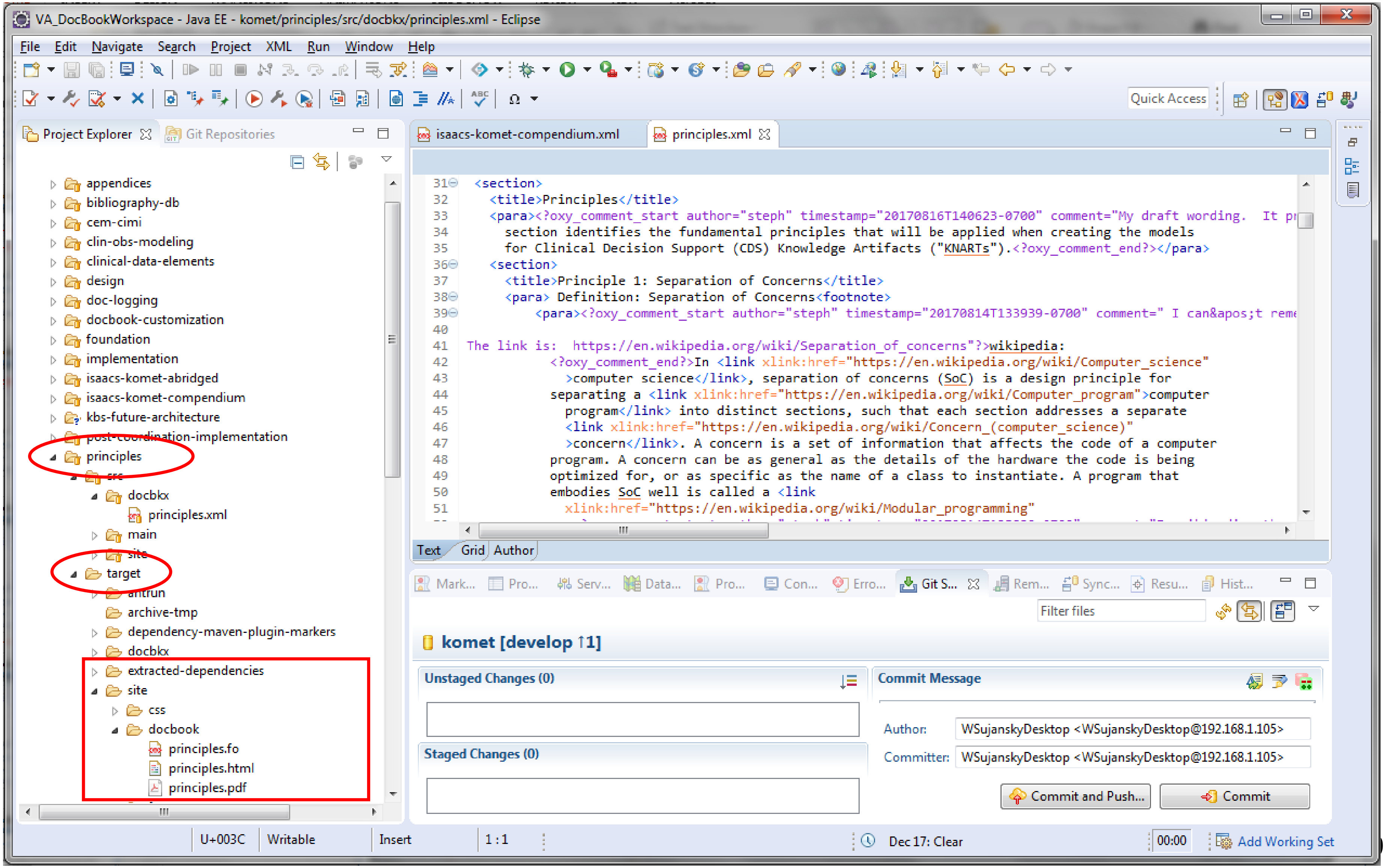
Author: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

Committer: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

Background and Terminology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Quick Access
Project Explorer
Git Repositories
isaacs-komet-compendium.xml
principles.xml
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Add Working Set

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appendices
bibliography-db
cem-cimi
clin-obs-modeling
clinical-data-elements
design
doc-logging
docbook-customization
foundation
implementation
isaacs-komet-abridged
isaacs-komet-compendium
kbs-future-architecture
post-coordination-implementation
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    docbkx
      principles.xml
    main
    site
  target
    antrun
    archive-tmp
    dependency-maven-plugin-markers
    docbkx
    extracted-dependencies
    site
      css
      docbook
        principles.fo
        principles.html
        principles.pdf
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        <para><?oxy_comment_start author="steph" timestamp="20170814T133939-0700" comment=" I can&apos;t reme

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          <?oxy_comment_end?>In <link xlink:href="https://en.wikipedia.org/wiki/Computer_science"
            >computer science</link>, separation of concerns (SoC) is a design principle for
          separating a <link xlink:href="https://en.wikipedia.org/wiki/Computer_program">computer
            program</link> into distinct sections, such that each section addresses a separate
            <link xlink:href="https://en.wikipedia.org/wiki/Concern_(computer_science)"
            >concern</link>. A concern is a set of information that affects the code of a computer
          program. A concern can be as general as the details of the hardware the code is being
          optimized for, or as specific as the name of a class to instantiate. A program that
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            xlink:href="https://en.wikipedia.org/wiki/Modular_programming"
```

komet [develop ↑1]

Unstaged Changes (0)

Staged Changes (0)

Commit Message

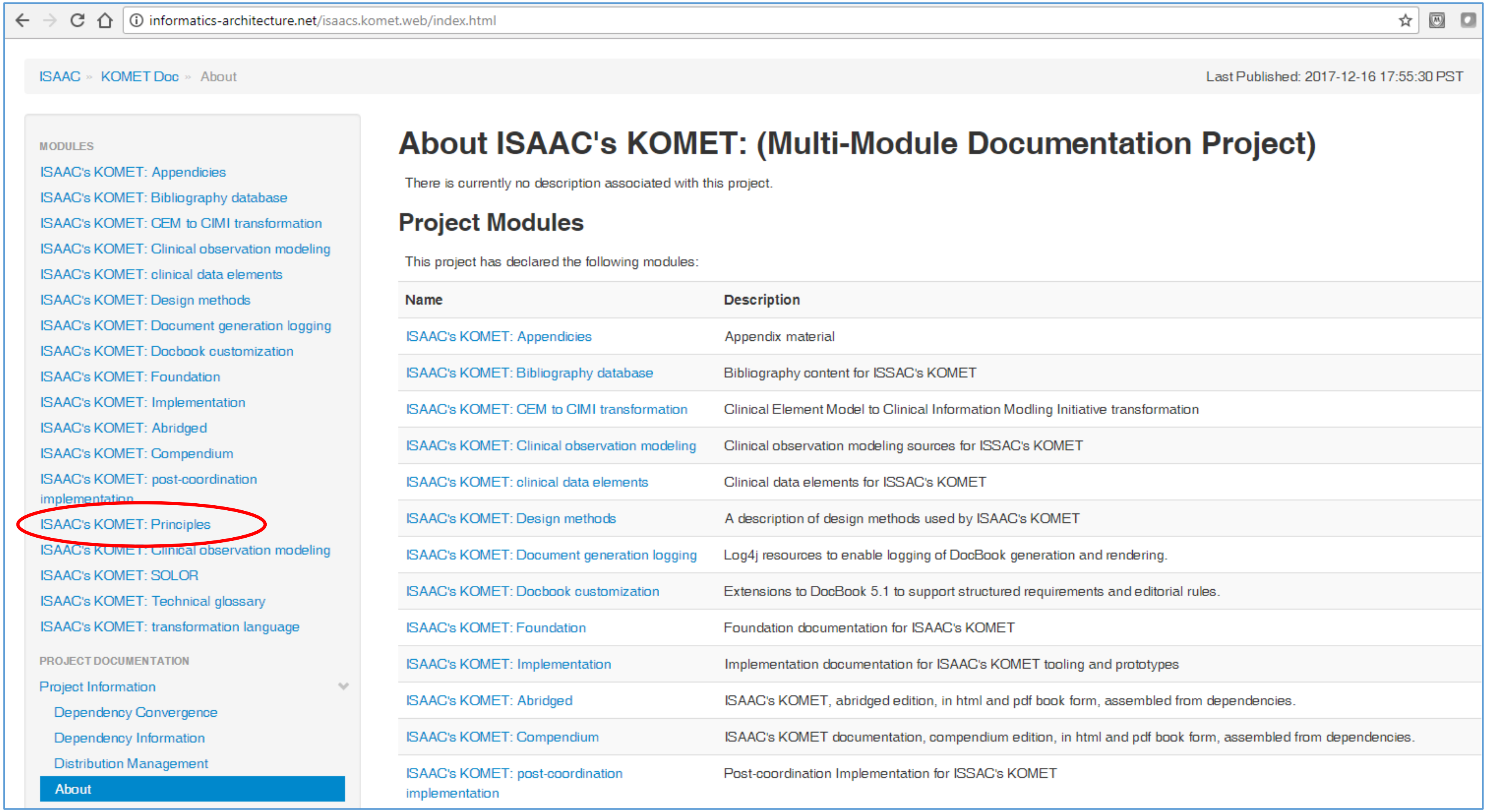
Author: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

Committer: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

Commit and Push...

Commit

Informatics-architecture.net Web Site



informatics-architecture.net/isaacs.komet.web/index.html

ISAAC » KOMET Doc » About

Last Published: 2017-12-16 17:55:30 PST

MODULES

- ISAAC's KOMET: Appendicies
- ISAAC's KOMET: Bibliography database
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- ISAAC's KOMET: Clinical observation modeling
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- ISAAC's KOMET: Docbook customization
- ISAAC's KOMET: Foundation
- ISAAC's KOMET: Implementation
- ISAAC's KOMET: Abridged
- ISAAC's KOMET: Compendium
- ISAAC's KOMET: post-coordination implementation
- ISAAC's KOMET: Principles
- ISAAC's KOMET: Clinical observation modeling
- ISAAC's KOMET: SOLOR
- ISAAC's KOMET: Technical glossary
- ISAAC's KOMET: transformation language

PROJECT DOCUMENTATION

- Project Information
  - Dependency Convergence
  - Dependency Information
  - Distribution Management
  - About

About ISAAC's KOMET: (Multi-Module Documentation Project)

There is currently no description associated with this project.

Project Modules

This project has declared the following modules:

Name	Description
ISAAC's KOMET: Appendicies	Appendix material
ISAAC's KOMET: Bibliography database	Bibliography content for ISSAC's KOMET
ISAAC's KOMET: CEM to CIMI transformation	Clinical Element Model to Clinical Information Modling Initiative transformation
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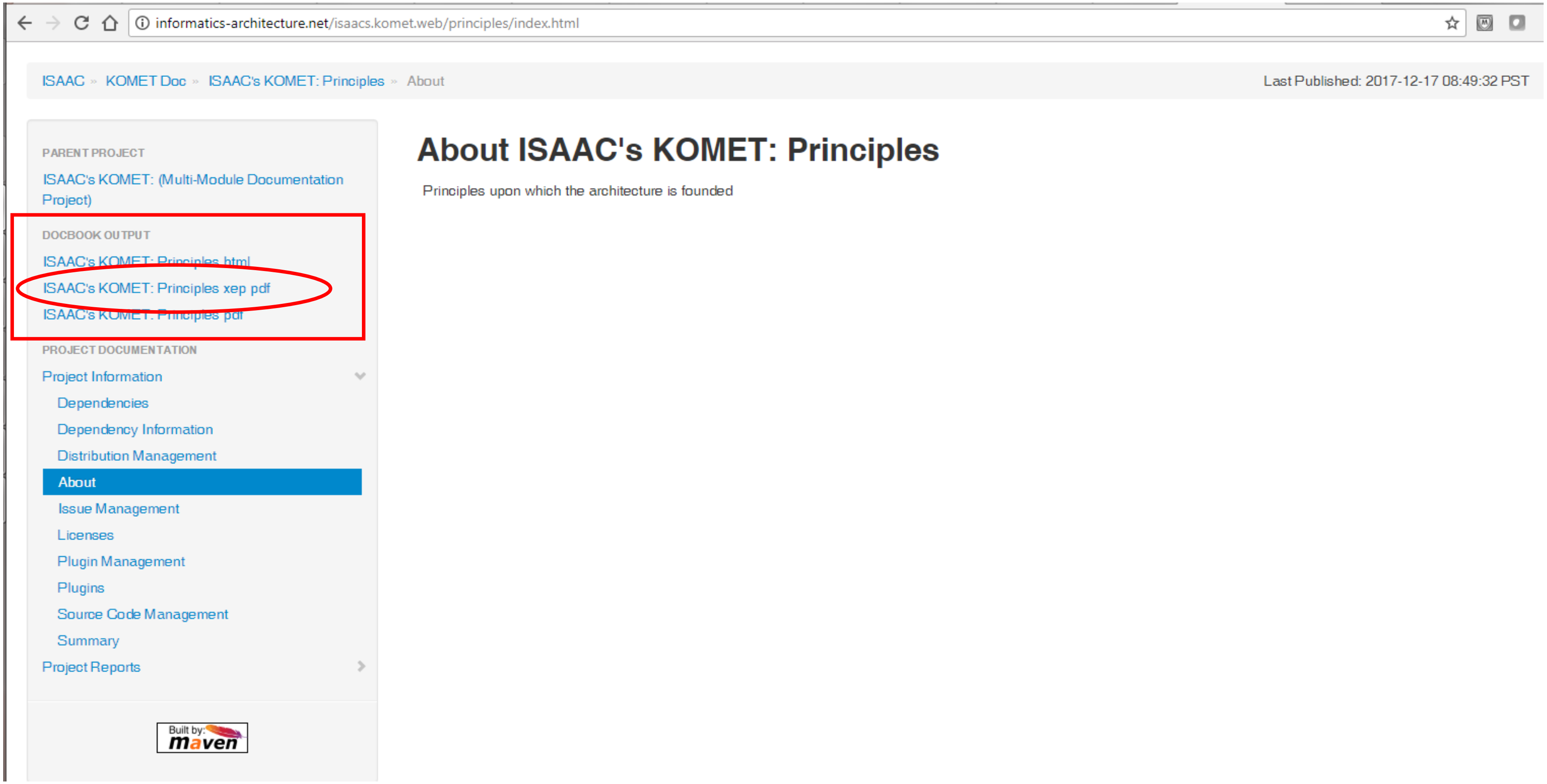
ISAAC's KOMET: clinical data elements	Clinical data elements for ISSAC's KOMET
ISAAC's KOMET: Design methods	A description of design methods used by ISAAC's KOMET
ISAAC's KOMET: Document generation logging	Log4j resources to enable logging of DocBook generation and rendering.
ISAAC's KOMET: Docbook customization	Extensions to DocBook 5.1 to support structured requirements and editorial rules.
ISAAC's KOMET: Foundation	Foundation documentation for ISAAC's KOMET
ISAAC's KOMET: Implementation	Implementation documentation for ISAAC's KOMET tooling and prototypes
ISAAC's KOMET: Abridged	ISAAC's KOMET, abridged edition, in html and pdf book form, assembled from dependencies.
ISAAC's KOMET: Compendium	ISAAC's KOMET documentation, compendium edition, in html and pdf book form, assembled from dependencies.
ISAAC's KOMET: post-coordination implementation	Post-coordination Implementation for ISSAC's KOMET

Background and Terminology



informatics-architecture.net/isaacs.komet.web/principles/index.html

ISAAC » KOMET Doc » ISAAC's KOMET: Principles » About

Last Published: 2017-12-17 08:49:32 PST

PARENT PROJECT

ISAAC's KOMET: (Multi-Module Documentation Project)

DOCBOOK OUTPUT

ISAAC's KOMET: Principles html

ISAAC's KOMET: Principles xep pdf

ISAAC's KOMET: Principles pdf

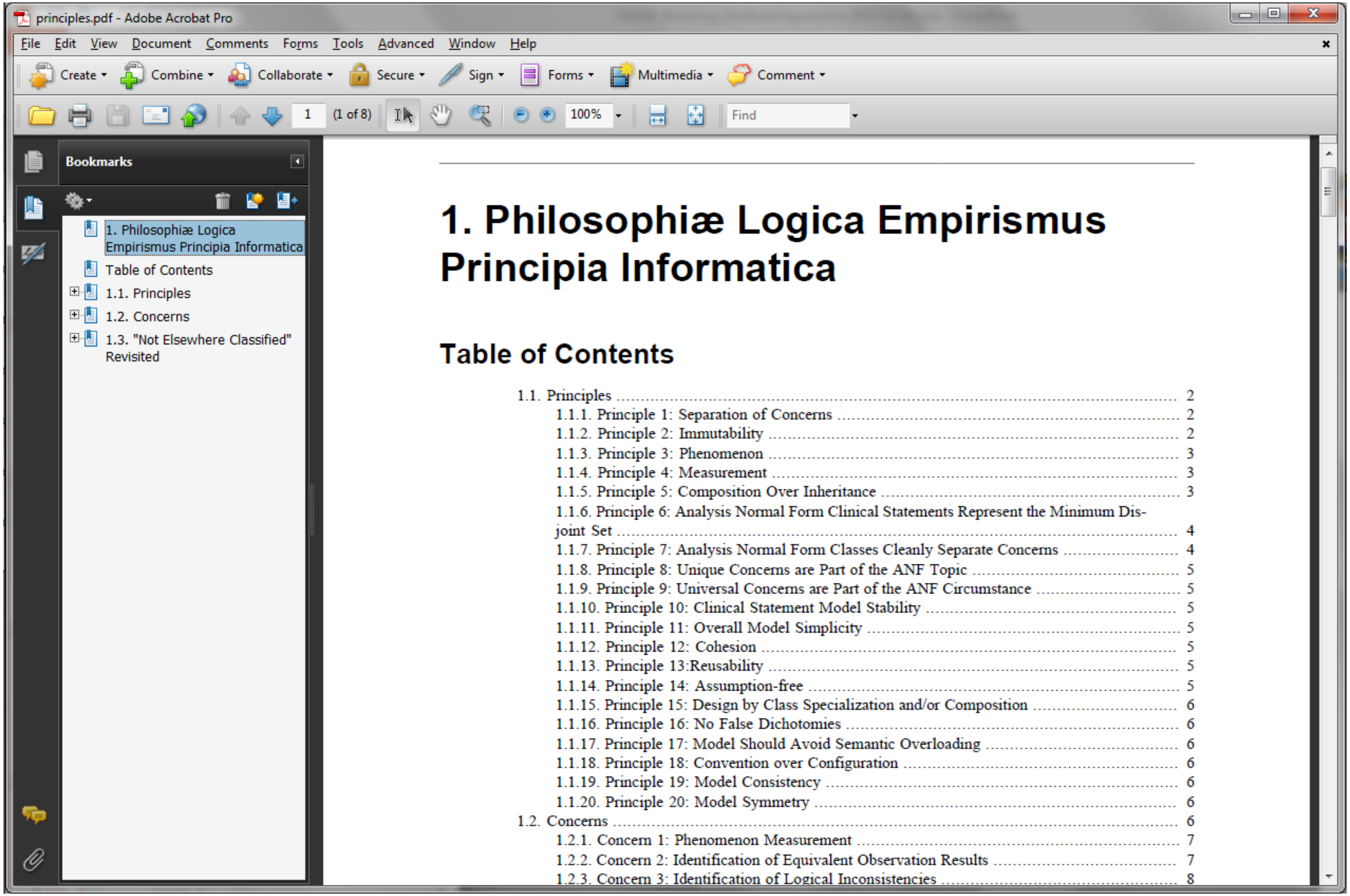
PROJECT DOCUMENTATION

- Project Information
  - Dependencies
  - Dependency Information
  - Distribution Management
  - About
  - Issue Management
  - Licenses
  - Plugin Management
  - Plugins
  - Source Code Management
  - Summary
- Project Reports

About ISAAC's KOMET: Principles

Principles upon which the architecture is founded

Pdf Output


principles.pdf - Adobe Acrobat Pro
File
Edit
View
Document
Comments
Forms
Tools
Advanced
Window
Help
Create
Combine
Collaborate
Secure
Sign
Forms
Multimedia
Comment
1
(1 of 8)
100%
Find
Bookmarks
1. Philosophiæ Logica Empirismus Principia Informatica
Table of Contents
1.1. Principles
1.2. Concerns
1.3. "Not Elsewhere Classified" Revisited

1. Philosophiæ Logica Empirismus Principia Informatica

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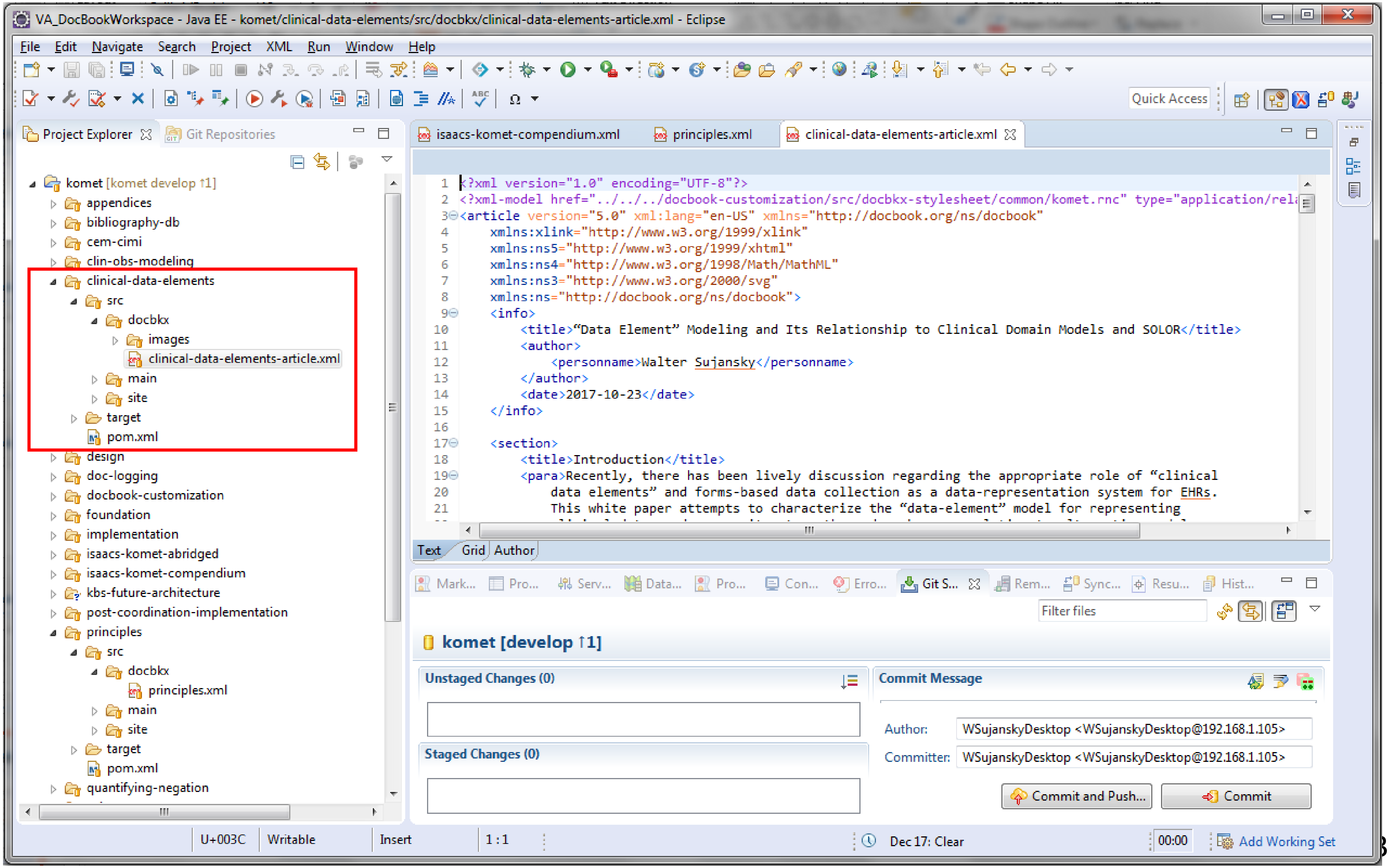
1.1. Principles 2
  1.1.1. Principle 1: Separation of Concerns 2
  1.1.2. Principle 2: Immutability 2
  1.1.3. Principle 3: Phenomenon 3
  1.1.4. Principle 4: Measurement 3
  1.1.5. Principle 5: Composition Over Inheritance 3
  1.1.6. Principle 6: Analysis Normal Form Clinical Statements Represent the Minimum Disjoint Set 4
  1.1.7. Principle 7: Analysis Normal Form Classes Cleanly Separate Concerns 4
  1.1.8. Principle 8: Unique Concerns are Part of the ANF Topic 5
  1.1.9. Principle 9: Universal Concerns are Part of the ANF Circumstance 5
  1.1.10. Principle 10: Clinical Statement Model Stability 5
  1.1.11. Principle 11: Overall Model Simplicity 5
  1.1.12. Principle 12: Cohesion 5
  1.1.13. Principle 13:Reusability 5
  1.1.14. Principle 14: Assumption-free 5
  1.1.15. Principle 15: Design by Class Specialization and/or Composition 6
  1.1.16. Principle 16: No False Dichotomies 6
  1.1.17. Principle 17: Model Should Avoid Semantic Overloading 6
  1.1.18. Principle 18: Convention over Configuration 6
  1.1.19. Principle 19: Model Consistency 6
  1.1.20. Principle 20: Model Symmetry 6
1.2. Concerns 6
  1.2.1. Concern 1: Phenomenon Measurement 7
  1.2.2. Concern 2: Identification of Equivalent Observation Results 7
  1.2.3. Concern 3: Identification of Logical Inconsistencies 8

Background and Terminology



VA_DocBookWorkspace - Java EE - komet/clinical-data-elements/src/docbkx/clinical-data-elements-article.xml - Eclipse

File Edit Navigate Search Project XML Run Window Help
Quick Access
Project Explorer
Git Repositories
komet [komet develop ↑1]
appendices
bibliography-db
cem-cimi
clin-obs-modeling
clinical-data-elements
src
docbkx
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main
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Staged Changes (0)
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        <author>
            <personname>Walter Sujansky</personname>
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        <title>Introduction</title>
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Author: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

Committer: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

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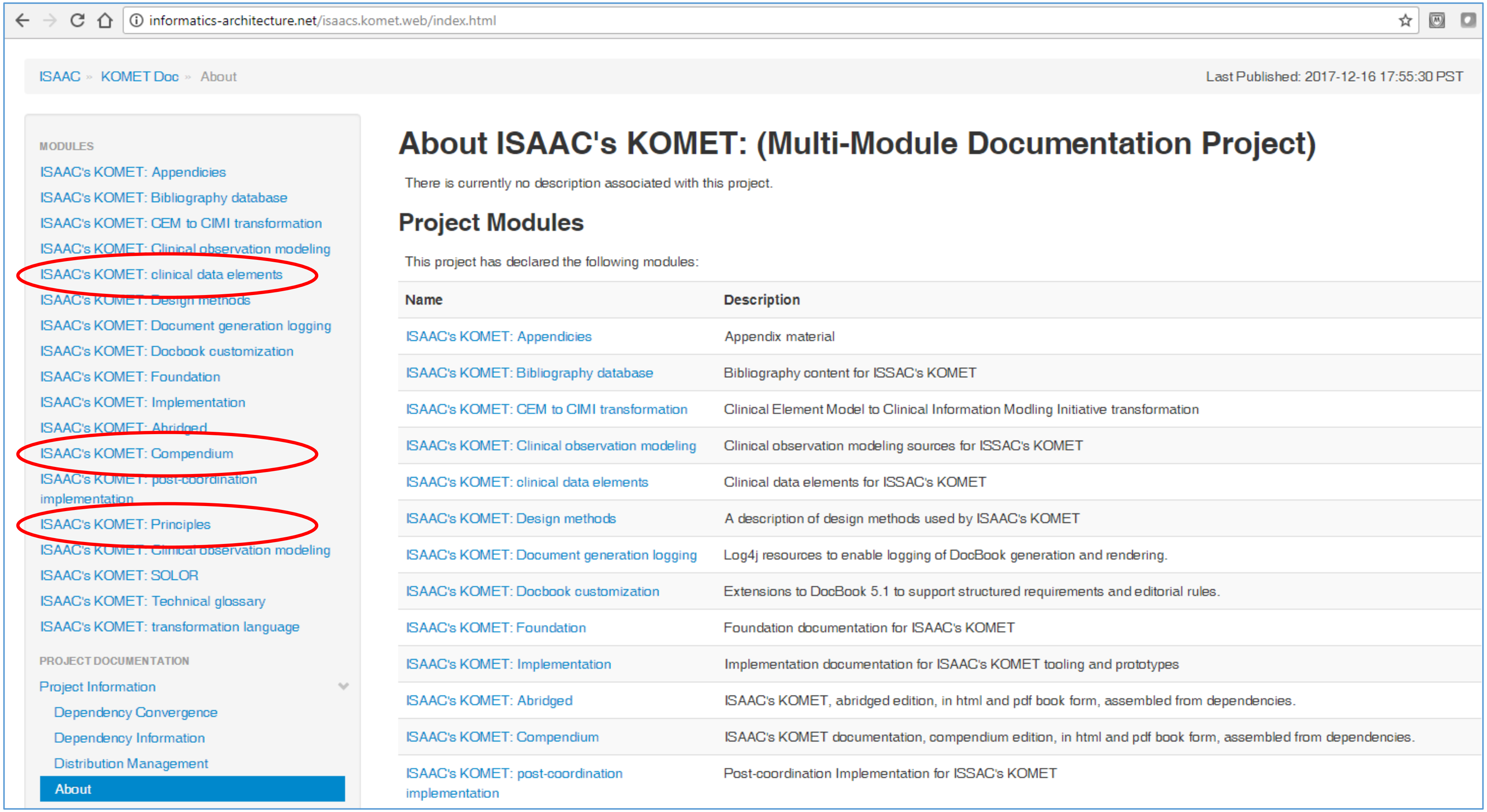

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ISAAC » KOMET Doc » About

Last Published: 2017-12-16 17:55:30 PST

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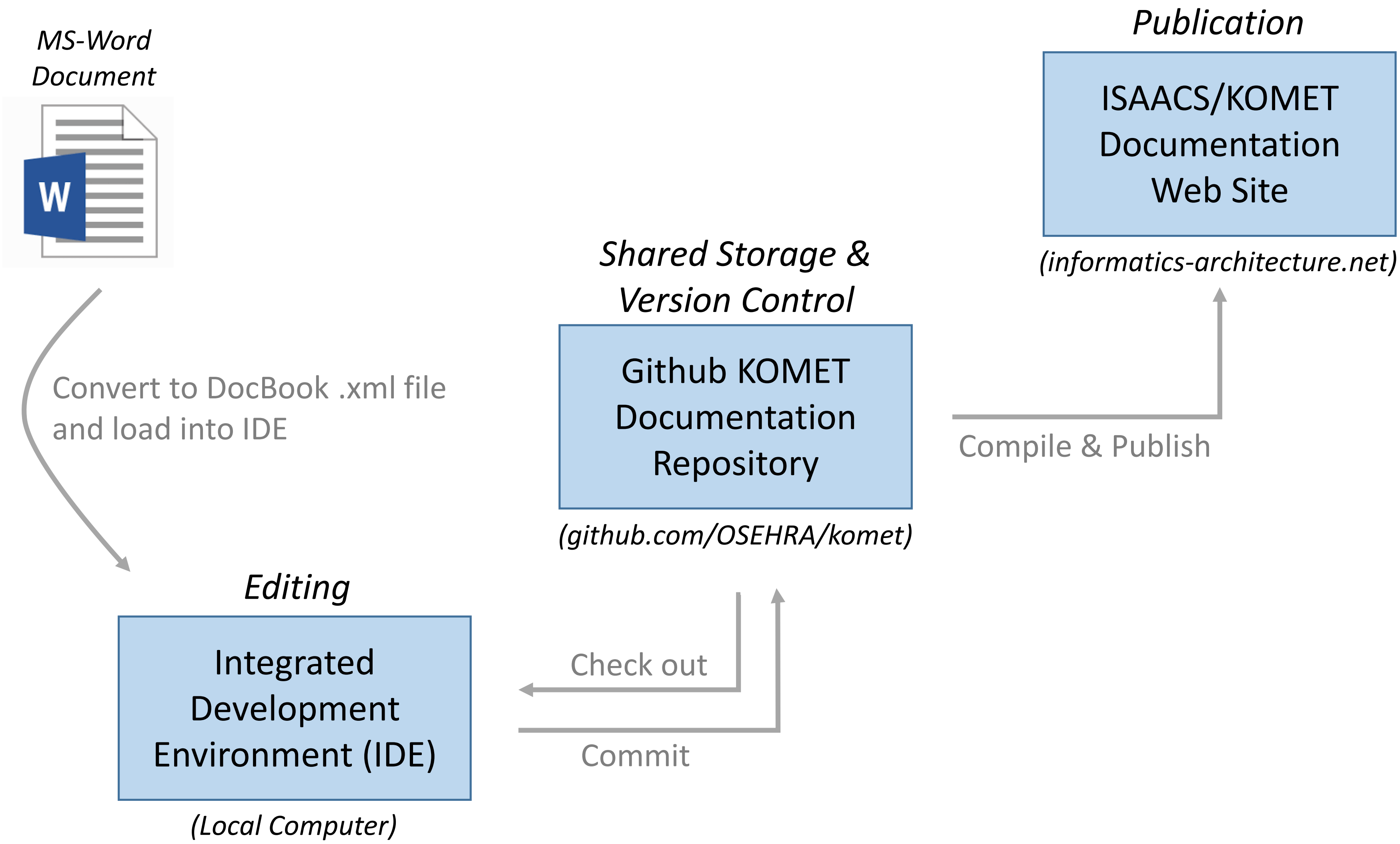


MS-Word Document

Convert to DocBook .xml file and load into IDE

Editing

Integrated Development Environment (IDE)

(Local Computer)

Check out

Commit

Shared Storage & Version Control

Github KOMET Documentation Repository

(github.com/OSEHRA/komet)

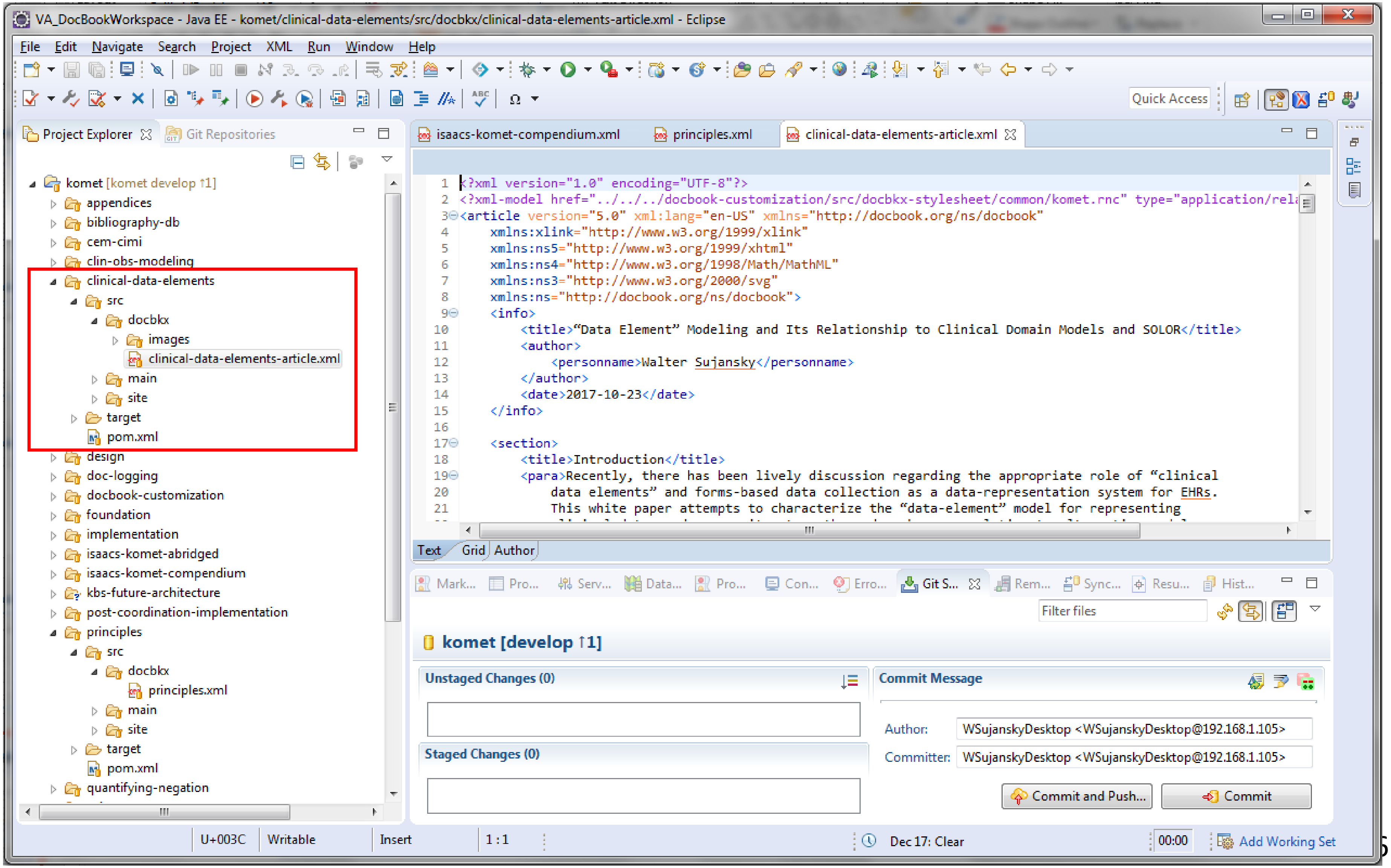
Compile & Publish

Publication

ISAACS/KOMET Documentation Web Site

(informatics-architecture.net)

Background and Terminology



VA_DocBookWorkspace - Java EE - komet/clinical-data-elements/src/docbkx/clinical-data-elements-article.xml - Eclipse

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Quick Access
Project Explorer
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isaacs-komet-compendium.xml
principles.xml
clinical-data-elements-article.xml
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Hist...
Filter files
Commit and Push...
Commit
Add Working Set

- komet [komet develop ↑1]
  - appendices
  - bibliography-db
  - cem-cimi
  - clin-obs-modeling
  - clinical-data-elements
    - src
      - docbkx
        - images
        - clinical-data-elements-article.xml
      - main
      - site
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            <personname>Walter Sujansky</personname>
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komet [develop ↑1]

Unstaged Changes (0)

Staged Changes (0)

Commit Message

Author: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

Committer: WSujanskyDesktop <WSujanskyDesktop@192.168.1.105>

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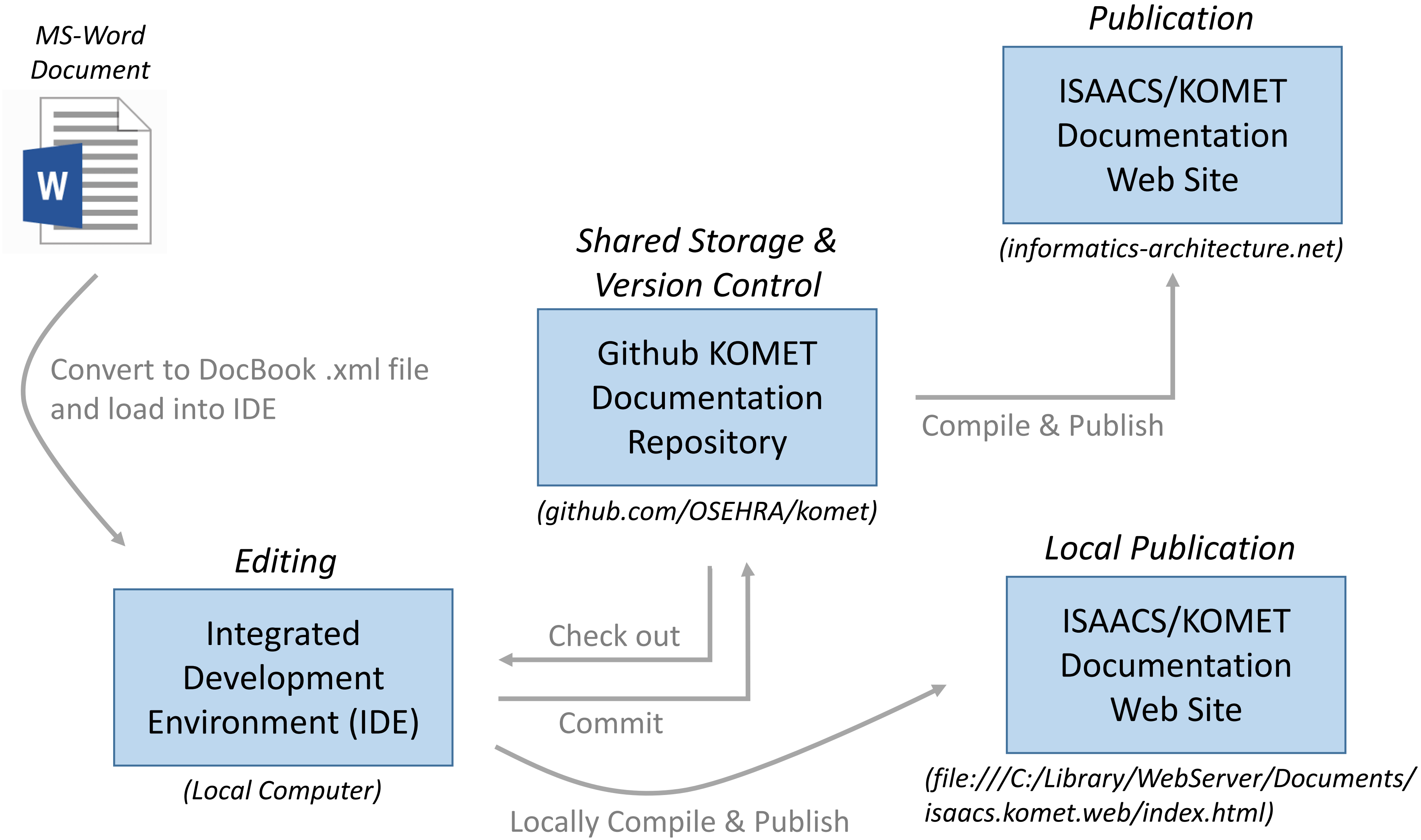
Management of Documentation Content



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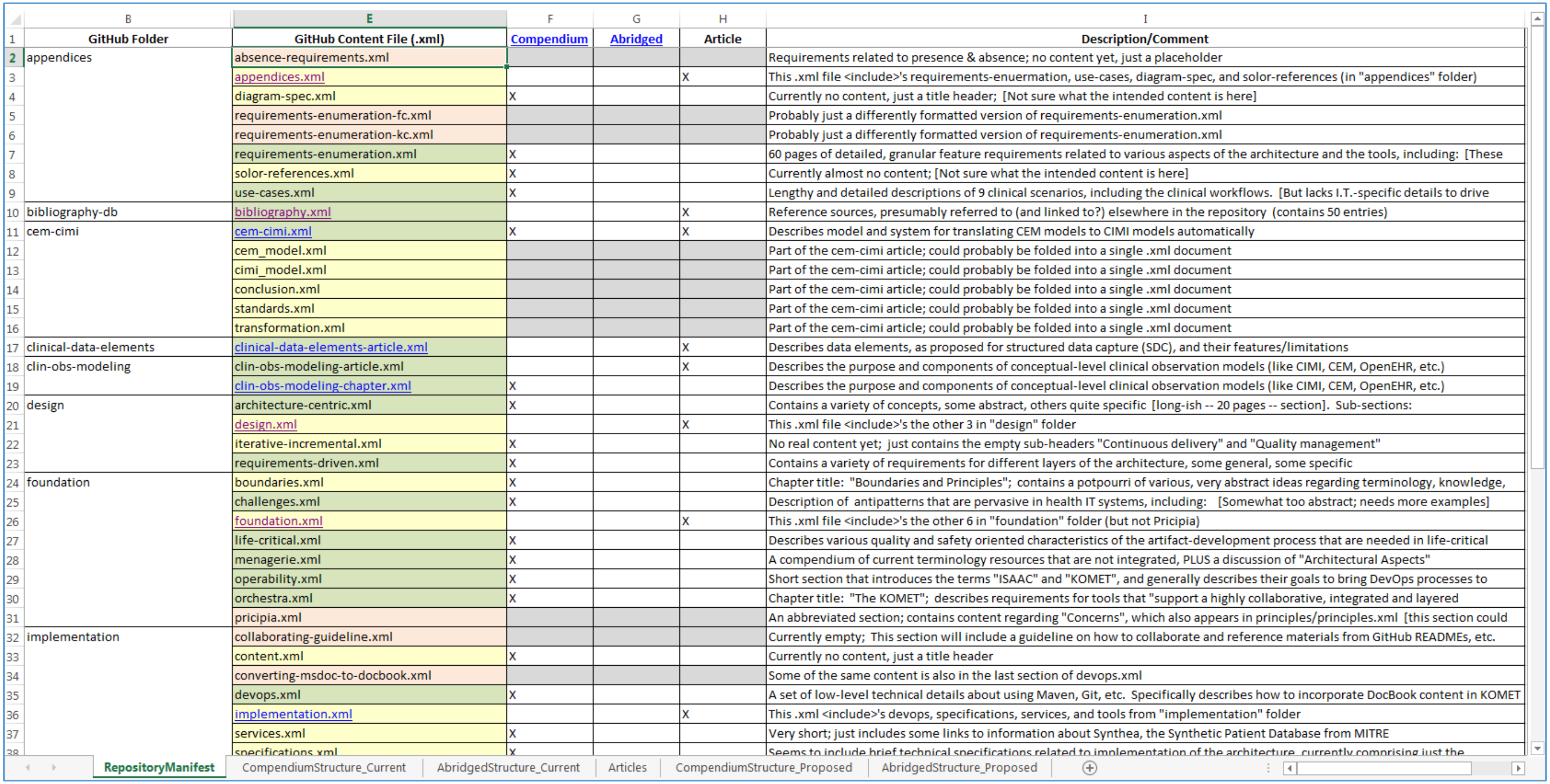
KOMET Documentation Content



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1	**GitHub Folder**	**GitHub Content File (.xml)**	**Compendium**	**Abridged**	**Article**	**Description/Comment**
2	appendices	absence-requirements.xml				Requirements related to presence & absence; no content yet, just a placeholder
3		appendices.xml			X	This .xml file <include>'s requirements-enuermation, use-cases, diagram-spec, and solor-references (in "appendices" folder)
4		diagram-spec.xml	X			Currently no content, just a title header; [Not sure what the intended content is here]
5		requirements-enumeration-fc.xml				Probably just a differently formatted version of requirements-enumeration.xml
6		requirements-enumeration-kc.xml				Probably just a differently formatted version of requirements-enumeration.xml
7		requirements-enumeration.xml	X			60 pages of detailed, granular feature requirements related to various aspects of the architecture and the tools, including: [These
8		solor-references.xml	X			Currently almost no content; [Not sure what the intended content is here]
9		use-cases.xml	X			Lengthy and detailed descriptions of 9 clinical scenarios, including the clinical workflows. [But lacks I.T.-specific details to drive
10	bibliography-db	bibliography.xml			X	Reference sources, presumably referred to (and linked to?) elsewhere in the repository (contains 50 entries)
11	cem-cimi	cem-cimi.xml	X		X	Describes model and system for translating CEM models to CIMI models automatically
12		cem_model.xml				Part of the cem-cimi article; could probably be folded into a single .xml document
13		cimi_model.xml				Part of the cem-cimi article; could probably be folded into a single .xml document
14		conclusion.xml				Part of the cem-cimi article; could probably be folded into a single .xml document
15		standards.xml				Part of the cem-cimi article; could probably be folded into a single .xml document
16		transformation.xml				Part of the cem-cimi article; could probably be folded into a single .xml document
17	clinical-data-elements	clinical-data-elements-article.xml			X	Describes data elements, as proposed for structured data capture (SDC), and their features/limitations
18	clin-obs-modeling	clin-obs-modeling-article.xml			X	Describes the purpose and components of conceptual-level clinical observation models (like CIMI, CEM, OpenEHR, etc.)
19		clin-obs-modeling-chapter.xml	X			Describes the purpose and components of conceptual-level clinical observation models (like CIMI, CEM, OpenEHR, etc.)
20	design	architecture-centric.xml	X			Contains a variety of concepts, some abstract, others quite specific [long-ish -- 20 pages -- section]. Sub-sections:
21		design.xml			X	This .xml file <include>'s the other 3 in "design" folder
22		iterative-incremental.xml	X			No real content yet; just contains the empty sub-headers "Continuous delivery" and "Quality management"
23		requirements-driven.xml	X			Contains a variety of requirements for different layers of the architecture, some general, some specific
24	foundation	boundaries.xml	X			Chapter title: "Boundaries and Principles"; contains a potpourri of various, very abstract ideas regarding terminology, knowledge,
25		challenges.xml	X			Description of antipatterns that are pervasive in health IT systems, including: [Somewhat too abstract; needs more examples]
26		foundation.xml			X	This .xml file <include>'s the other 6 in "foundation" folder (but not Pricipia)
27		life-critical.xml	X			Describes various quality and safety oriented characteristics of the artifact-development process that are needed in life-critical
28		menagerie.xml	X			A compendium of current terminology resources that are not integrated, PLUS a discussion of "Architectural Aspects"
29		operability.xml	X			Short section that introduces the terms "ISAAC" and "KOMET", and generally describes their goals to bring DevOps processes to
30		orchestra.xml	X			Chapter title: "The KOMET"; describes requirements for tools that "support a highly collaborative, integrated and layered
31		pricipia.xml				An abbreviated section; contains content regarding "Concerns", which also appears in principles/principles.xml [this section could
32	implementation	collaborating-guideline.xml				Currently empty; This section will include a guideline on how to collaborate and reference materials from GitHub READMEs, etc.
33		content.xml	X			Currently no content, just a title header
34		converting-msdoc-to-docbook.xml				Some of the same content is also in the last section of devops.xml
35		devops.xml	X			A set of low-level technical details about using Maven, Git, etc. Specifically describes how to incorporate DocBook content in KOMET
36		implementation.xml			X	This .xml <include>'s devops, specifications, services, and tools from "implementation" folder
37		services.xml	X			Very short; just includes some links to information about Synthea, the Synthetic Patient Database from MITRE
38		specifications.xml	X			Seems to include brief technical specifications related to implementation of the architecture, currently comprising just the

RepositoryManifest
CompendiumStructure_Current
AbridgedStructure_Current
Articles
CompendiumStructure_Proposed
AbridgedStructure_Proposed

Recommendations

- Consider who the audience is for the compendium, abridged, and individual articles, and construct them accordingly
    - Is compendium needed if the repository web site exists?
- Add section identifiers within .xml documents so that sub-parts of these documents can be more selectively referenced by and inserted into other documents (i.e., compendium/abridged versions)
- Remove transitional text from the .xml documents themselves, and instead put that into containing documents, which will allow greater mixing and matching of content
- Create additional content to better put the existing DocBook chapters and sections into context and to better link them together

Recommendations

- Chapter and section headings should be more descriptive of their content to help readers better navigate and understand the context of individual parts of the documents
  - E.g., “Principles for the Semantic Representation of Clinical Data” rather than “Principles”

Thank you

Questions?