

# Assertion

## Development Guide<sup>1</sup>

*A suite of tools to assist with automating functional,  
integration and performance testing of message based systems.*

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<sup>1</sup> With infinite time and resources this would be a more formal specification.

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<b>Author</b>	<b>Details</b>
0.1.0 (2009 Oct 17)	Initial Version
David Gleeson	- OSGi packaging of Google Guava & Collections - Message Archive & Viewer Spike

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# Message Archive File Format

Each Archive has two files, the index which is a fixed length format and contains entries which point to a second file, the data file.

## ***example.index***

The entries are a fixed length of 128 bytes. The first entry is at byte 0 thru byte 127.

Sample Data:

```
[00 00 00 00 00 00 00 00] [00 00 00 0A] [00 00 01 24 60 07 77 32] [01] [02] [00 00 00 0A] [52 65
71 75 65 73 74 20 23 31 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00]
```

Data (Byte Count)	Field (Data Type)	Example
[00 00 00 00 00 00 00 00] (8)	Data Position (Long)	The data file entry starts at 0
[00 00 00 0A] (4)	Data Length (Integer)	The data file entry is length 10
[00 00 01 24 60 07 77 32] (8)	Date / Time (Long / Java)	2009-10-17 14:05:52.434
[01] (1)	Source (Byte)	This entry is from lifeline 1
[02] (1)	Target (Byte)	This entry is to lifeline 2
[00 00 00 0A] (4)	Display Name Length (Integer)	The display name is length 10.
[52 65 71 75 65 73 74 20 23 31 00 00 00 00 00 ... ] (102)	Display Name (byte[]) Note: left justified right 0 pad	The display name is 'Request #1'

## ***example.data***

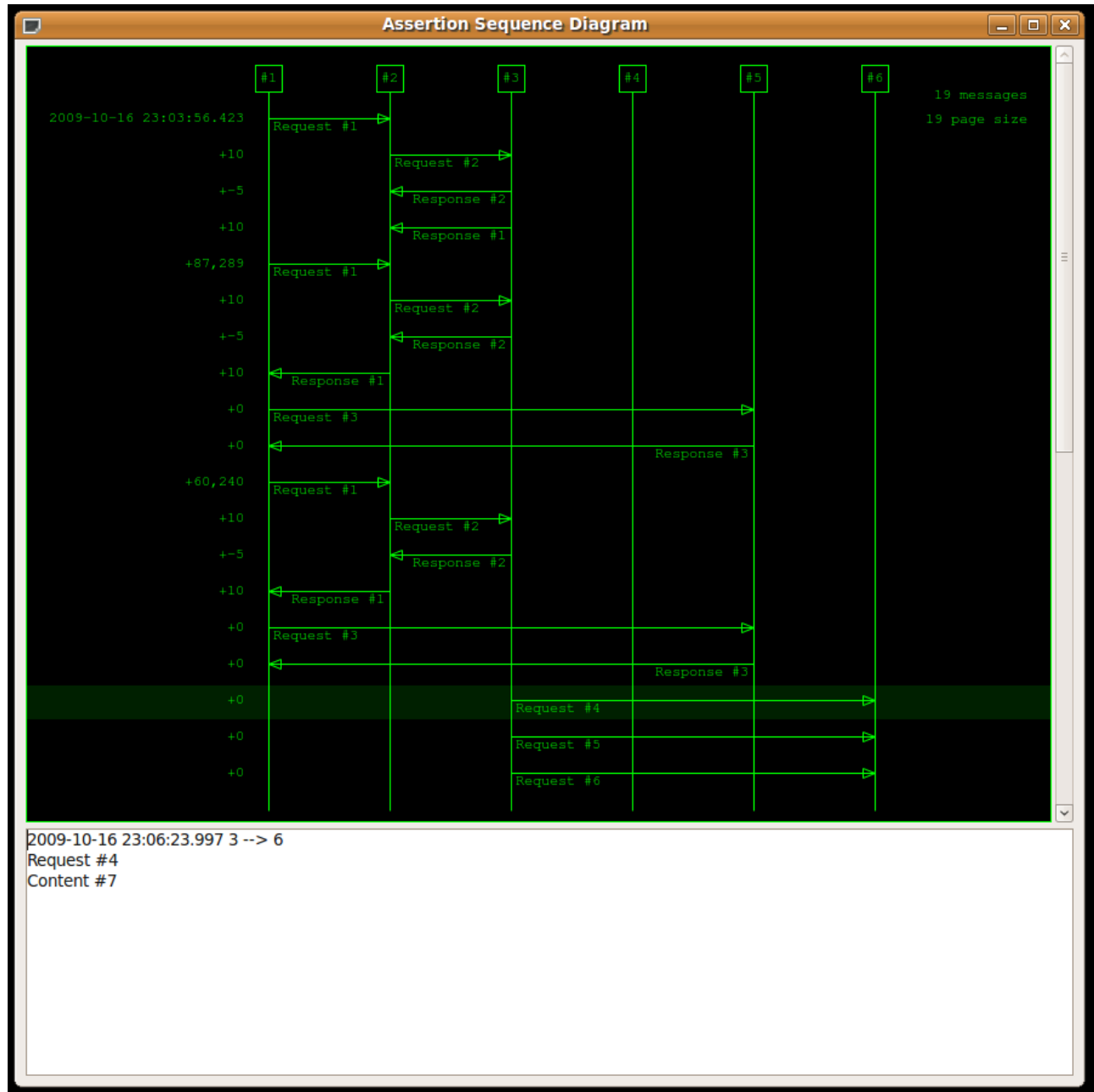
The entries have a position of Data Position and length of Data Length as defined by the fields in the .index file.

```
[43 6F 6E 74 65 6E 74 20 23 31]
```

Data (Byte Count)	Field (Data Type)	Example
[43 6F 6E 74 65 6E 74 20 23 31] (n)	Data (byte[])	The data for entry 1 is 'Content #1' (starts at byte 0 and finishes at byte 9)

# Message Archive Viewer

## User Interface



## User Stories

As a **user** I want to **view the contents of a message archive file graphically** so **I can explore the test execution**.

- A Graphical User Interface
- A linelines for each participant in the message passing system
- Each message has a row and is active from source lifeline to target lifeline
- Pass an argument to process choose file

- Scroll bar to navigate
- Select message, highlights and can see details (including contents) in lower panel

## Development Environment

Java 1.6

Eclipse Galileo 20090619-0625 with the following plugins

- For reporting on JUnit Coverage: EclEmma 1.4.2 (<http://update.eclemma.org/>)

Ant 1.7

Bless 0.5.2 (Hex Editor)

Open Office 3.0

## Demonstration

1. assertion/setup.txt
2. In Eclipse:
  1. ExampleArchiveThreadMain.launch
  2. SequenceDiagramThreadMain - EXAMPLE.launch

## Depedendencies

Title	URL
Standard Widget Toolkit User Interface Library	<a href="http://www.eclipse.org/swt">http://www.eclipse.org/swt</a>
Google Guava	<a href="http://code.google.com/p/guava-libraries/">http://code.google.com/p/guava-libraries/</a>
Google Collections	<a href="http://code.google.com/p/google-collections/">http://code.google.com/p/google-collections/</a>