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Andrea Mocci

Michele Lanza



University of Lugano

Shoreline

Bugs, the Smalltalk way





Bugs

Bug fixing



How do fixes become bugs?

Z. Yin, D. Yuan, Y. Zhou, S. Pasupathy, and L. Bairavasundaram.
ACM ESEC/FSE 2011

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Bugzilla Bug 305134 **Description :** Remove FeedView from Firefox 1.5 Last modified: 2005-08-28 01:41 PDT

[Search page](#)

[Enter new bug](#)

Bug#: [305134](#) alias:

Hardware: All

Reporter: [Ben Goodger \(use ben at mozilla dot org for email\)](#)
<bugs@bengoodger.com>

Product: Firefox

OS: All

Add CC:

Component: RSS Discovery and Preview

Version: unspecified

CC: alex@spamcop.net
axel@pike.org
bugs.mano@sent.com
bugtrap@psychoticwol.com
bugzilla@dougweb.org

Status: RESOLVED

Priority: -

Remove selected CC

Resolution: FIXED

Severity: normal

Assigned To: Ben Goodger (use ben at mozilla dot org for email)
<bugs@bengoodger.com>

Target Milestone: -

QA Contact:

URL:

Flags: ([Help!](#))

Summary:

mtschrep: blocking1.8b4rc

bugs: blocking1.8b4

blocking1.9a1

Status Whiteboard:

blocking-aviary1.0.7

blocking-aviary2.0

Keywords:

testcase

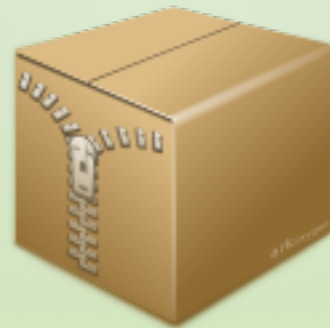
Attachment	Type	Created	Size	Flags	Actions
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Bug Reports

difficult to search



expensive to manage



often inadequate or incorrect



How Long will it Take to Fix This Bug?

Cathrin Weiss, Rahul Premraj, Thomas Zimmermann, and Andreas Zeller
ACM MSR 2007

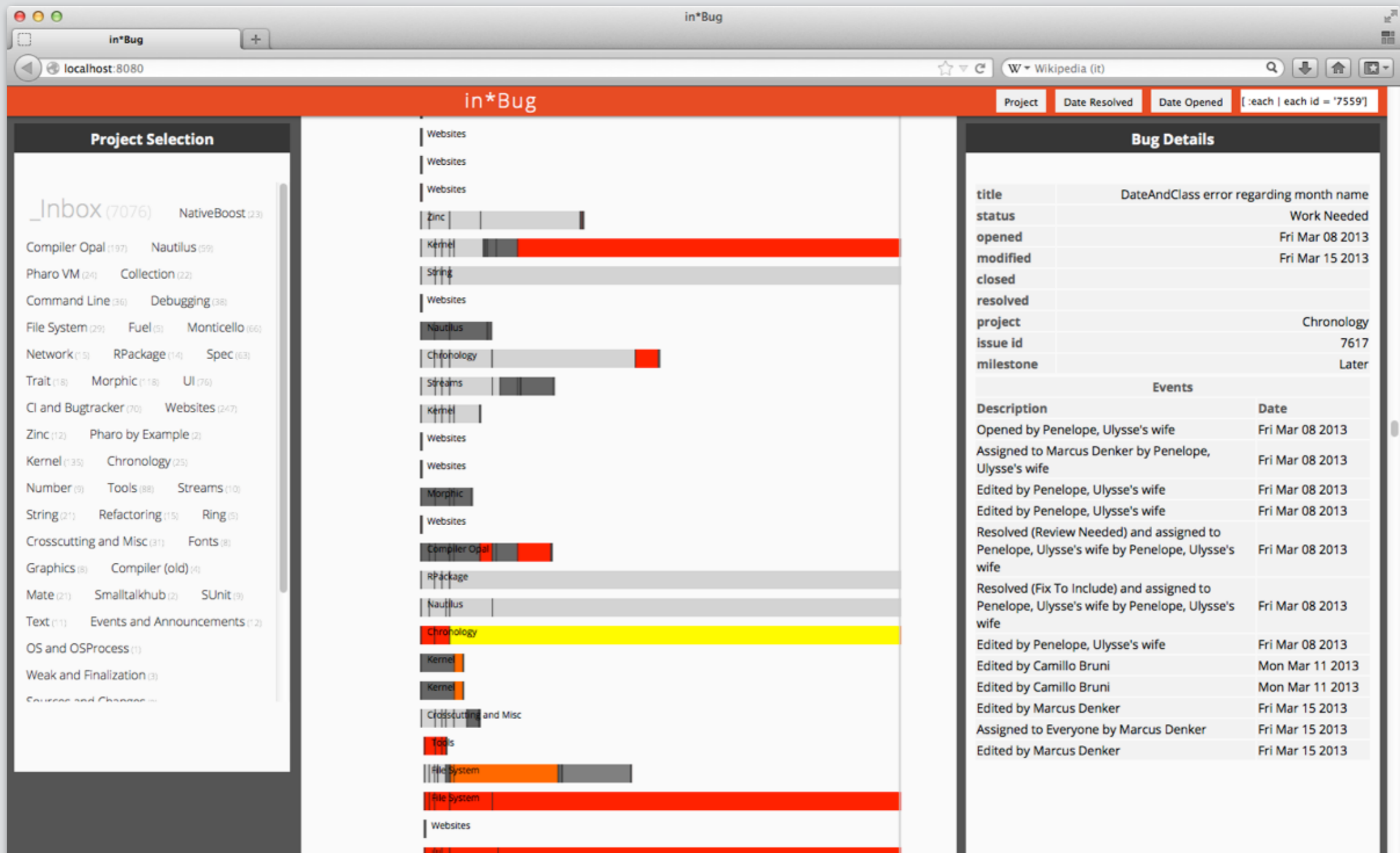
Reducing the Effort of Bug Report Triage: Recommenders for Development-Oriented Decisions

John Anvik and Gail C. Murphy
ACM Trans. Softw. Eng. Methodol. Aug 2011

What makes a good bug report?

T. Zimmermann, R. Premraj, N. Bettenburg, S. Just, A. Schroter, and C. Weiss. IEEE Transactions on Software Engineering (TSE) 2010.

in*Bug



A closer look at bugs bugtracker -- 1589 displayed issues
Tommaso Dal Sasso, Michele Lanza.
IEEE VISSOFT 2013.

*in*Bug: Visual analytics of bug repositories*
Tommaso Dal Sasso, Michele Lanza.
IEEE CSMR-WCRE 2014

ShoreLine

The screenshot shows a web browser window with the title "ShoreLine". The address bar shows "localhost:4000". The page header includes the "ShoreLine" logo, the name "Helios", and a "Login" link.

The main content area is divided into two sections: "Controls" and "Reports".

Controls: A "Test Filter" input field with a gear icon for settings.

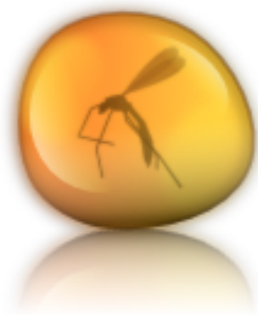
Projects: A list of projects with "Show all" and "Hide all" buttons. The projects listed are:

- _Inbox (1)
- Athens (0)
- Chronology (5)
- CI and Bugtracker (9)
- Collection (10)
- Command Line (1)
- Compiler Opal (11)
- Consortium and Association (0)
- Crosscutting and Misc (9)

Reports: A table of reports with columns for ID, description, date, and count. The reports are:

id	Description	Date	Count
12278	Changesorter menus are broken	Fri Dec 20 2013	9
12467	Pharo crashes if Monticello can't create the package-cache directory	Fri Dec 20 2013	5
12114	BehaviorTest>>testBehaviorRespectsPolymorphismWithTraitBehavior: Needs to be fixed	Fri Dec 20 2013	3
12466	Nautilus does not refresh when deleting a category	Fri Dec 20 2013	6
12392	Eyelnspector should not depend on Nautilus	Fri Dec 20 2013	7
11403	--all-- protocol disappears when browsing scoped	Fri Dec 20 2013	6
12468	KernelTests packages are messed up on changes	Fri Dec 20 2013	5
12469	Sometimes an empty protocol is created	Fri Dec 20 2013	3
12456	Split Komitter RemotesManager in 2 parts	Fri Dec 20 2013	11
12438	Old FFI: Check that it is parsed correctly and works	Fri Dec 20 2013	4
12451	Error on Browse Full in Nautilus from class in group view	Fri Dec 20 2013	9
12144	TextModel>>getSelection	Fri Dec 20 2013	24
12449	Nautilus setting "Show groups on top" breaks automatic group update	Fri Dec 20 2013	6
12201	MorphTreeMorph should not hardcode the color of the header row	Fri Dec 20 2013	5

ShoreLine



Amber
Smalltalk brought to the web

Tide



ShoreLine Helios Login

localhost:4000 DuckDuckGo

Controls

Test Filter

Projects

Show all	Hide all
_Inbox	1
Athens	0
Chronology	5
CI and Bugtracker	9
Collection	10
Command Line	1
Compiler Opal	11
Consortium and Association	0
Crosscutting and Misc	9
Debugging	9
Events and Announcements	10

Reports

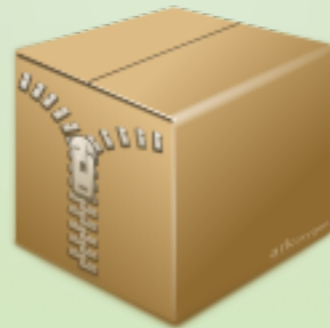
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12144	TextModel->getSelection	Fri Dec 20 2013	24
12449	Nautilus setting "Show groups on top" breaks automatic group update	Fri Dec 20 2013	6
12201	MorphTreeMorph should not hardcode the color of the header row	Fri Dec 20 2013	5
11783	#layout should be renamed to e.g. #slotLayout	Fri Dec 20 2013	10
12394	There is book.pharo-project.org but no book.pharo.org	Fri Dec 20 2013	3

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Stack Traces

The screenshot shows a window titled "ZeroDivide" with a stack trace. The stack trace lists the following frames from top to bottom:

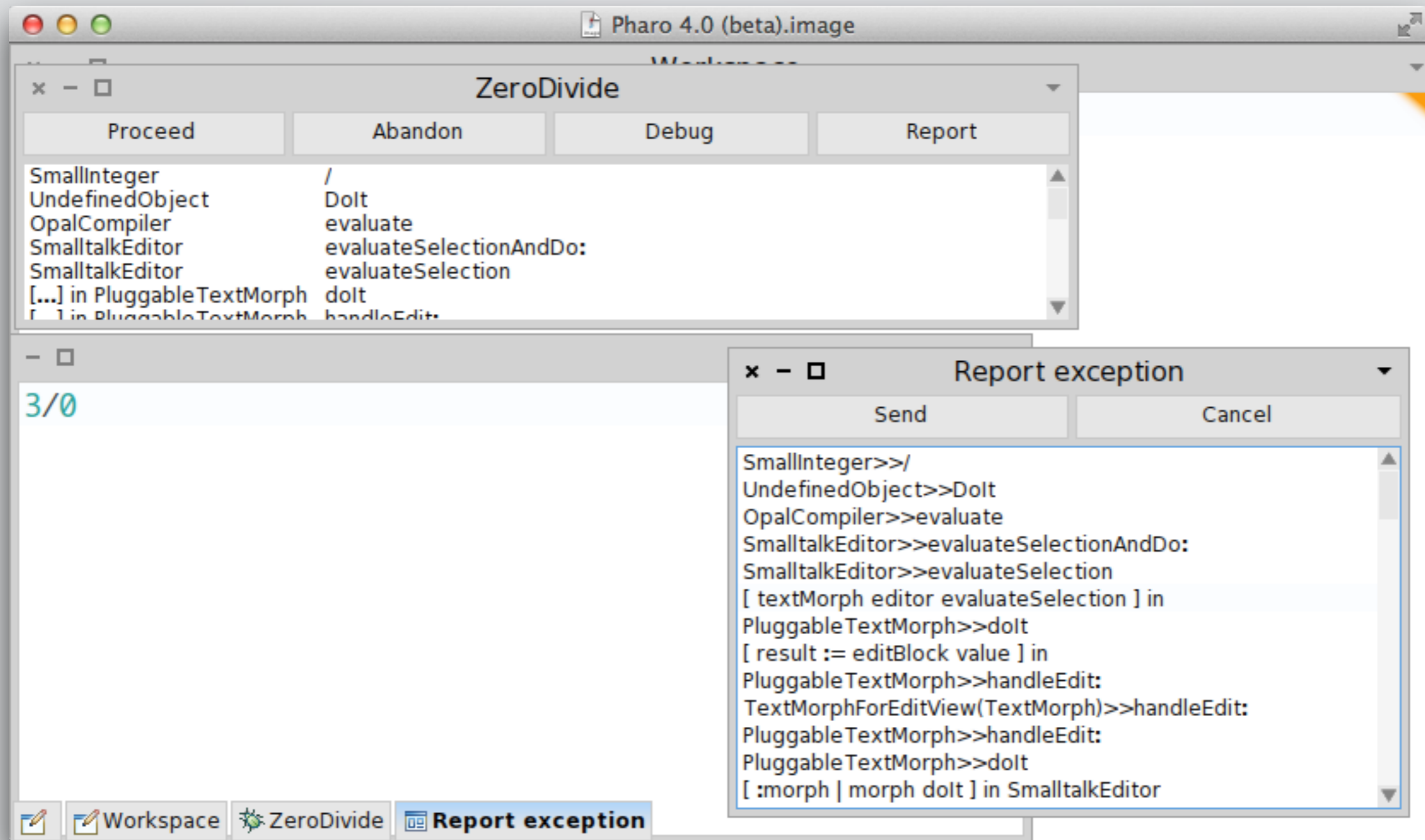
- SmallInteger /
- UndefinedObject Dolt
- OpalCompiler evaluate
- SmalltalkEditor evaluateSelectionAndDo:
- SmalltalkEditor evaluateSelection
- [...] in PluggableTextMorph dolt
- [...] in PluggableTextMorph handleEdit:
- TextMorphForEditView(TextMorph) handleEdit:
- PluggableTextMorph handleEdit:
- PluggableTextMorph dolt
- [...] in SmalltalkEditor class buildSmalltalkEditorKeymappingsOn:
- BlockClosure cull:
- BlockClosure cull:cull:
- BlockClosure cull:cull:cull:
- KMCategoryBinding completeMatch:buffer:
- [...] in KMKeymap notifyCompleteMatchTo:buffer:
- Array(SequenceableCollection) do:
- KMKeymap notifyCompleteMatchTo:buffer:
- KMKeymap onMatchWith:notify:andDo:
- [...] in KMCategory onMatchWith:notify:andDo:

Below the stack trace is a control bar with buttons: Proceed, Restart, Into, Over, Through, Full Stack, Run to here, and Where is?.

The main text area contains the following text:

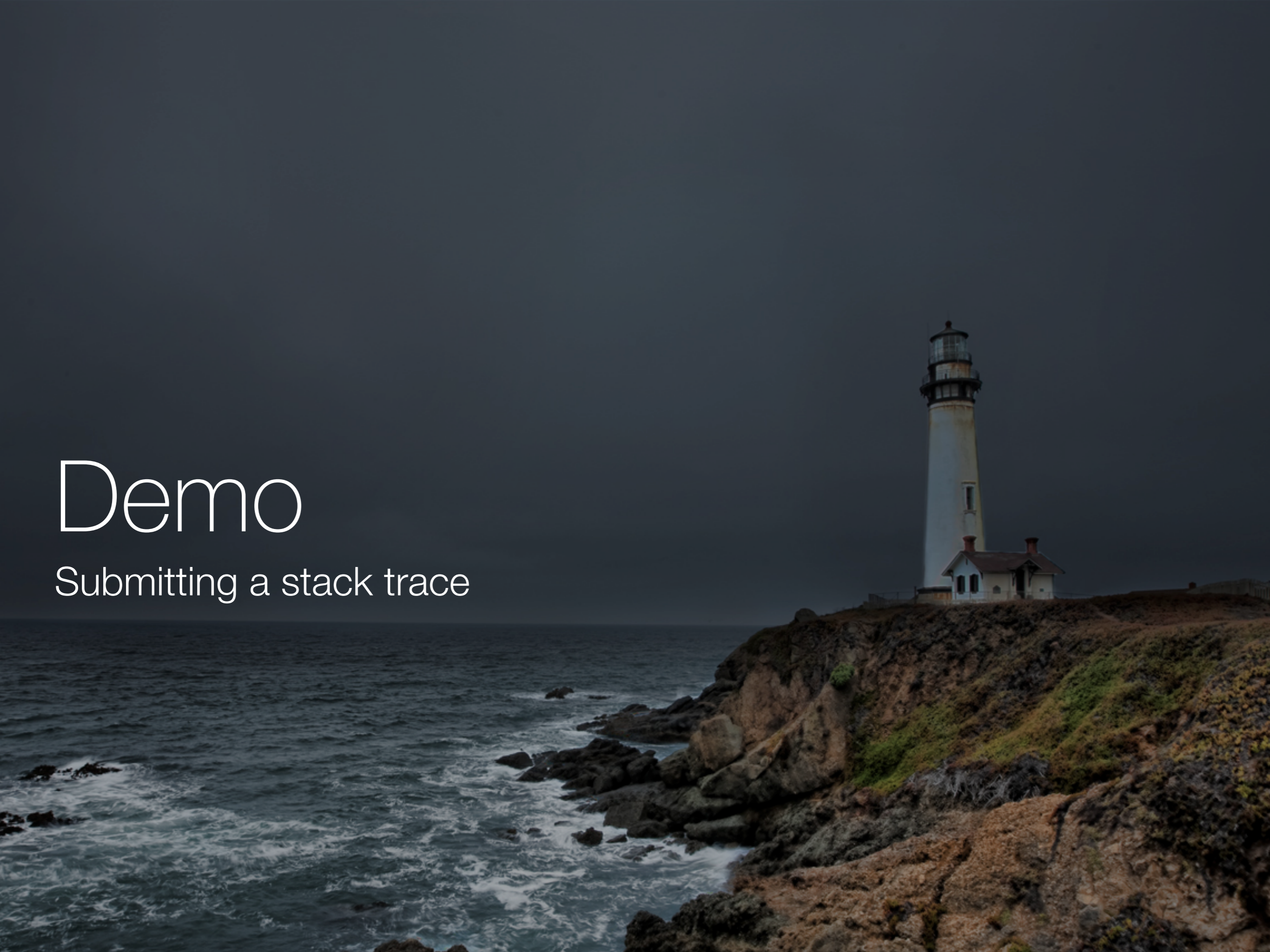
the argument
and returns the result if the division is exact. Fail if
the result is not a
whole integer. Fail if the argument is 0 or is not a
SmallInteger. Optional.

ShoreLine Reporter




Demo


Submitting a stack trace





Settings

▼  ShoreLine Report

 Enable reporting

 Automatically submit reports

 Enable notifications

 Display report summary

▶  Server settings

Project infos

 Edit infos

Monticello registration

License	MIT
Tags	
Creation date	Thu Jun 12 2014
Website	

```
MCHttpRepository
  location: 'http://www.smalltalkhub.com/mc/dalsat/ShoreLine-Reporter/main'
  user: ''
  password: ''
```

About ShoreLine-Reporter

ShoreLine Reporter allows for automatic submission of stacktraces generated from exceptions.

You can load ShoreLine Reporter with the following script:

```
StartupLoader default executeAtomicItems: {
  StartupAction
    name: 'ShoreLine-Reporter Installer'
    code: [ [
      Gofer it
        smalltalkhubUser: 'dalsat' project: 'ShoreLine-Reporter';
        configuration;
        load.
      (Smalltalk at: #ConfigurationOfShoreLineReporter) load.

      "Setting Reporter configuration - uncomment the ones that you need"
      "SlReporter enabled: true."
      "SlReporter autoSubmit: false."
      "SlReporter showSummary: true."
      "SlReporter showNotification: true."

      ] asJob run ]
  runOnce: true.
}.
```

Check the Shoreline section in the Settings browser to configure the level of notification verbosity you prefer.

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      "SlReporter showNotification: true."

      ] asJob run ]
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}.
```

<http://www.smalltalkhub.com/#!/~dalsat/ShoreLine-Reporter>

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        "SlReporter showNotification: true."

      ] asJob run ]
  runOnce: true.
}.
```

<http://www.smalltalkhub.com/#!/~dalsat/ShoreLine-Reporter>

Demo

Configuring ShoreLine Reporter



Collected Data

Date

Author Name

Version
(date, update, name)

Stacktrace
(Class name,
method name)

Why?



STAND BACK



**I'M GOING TO TRY
SCIENCE**

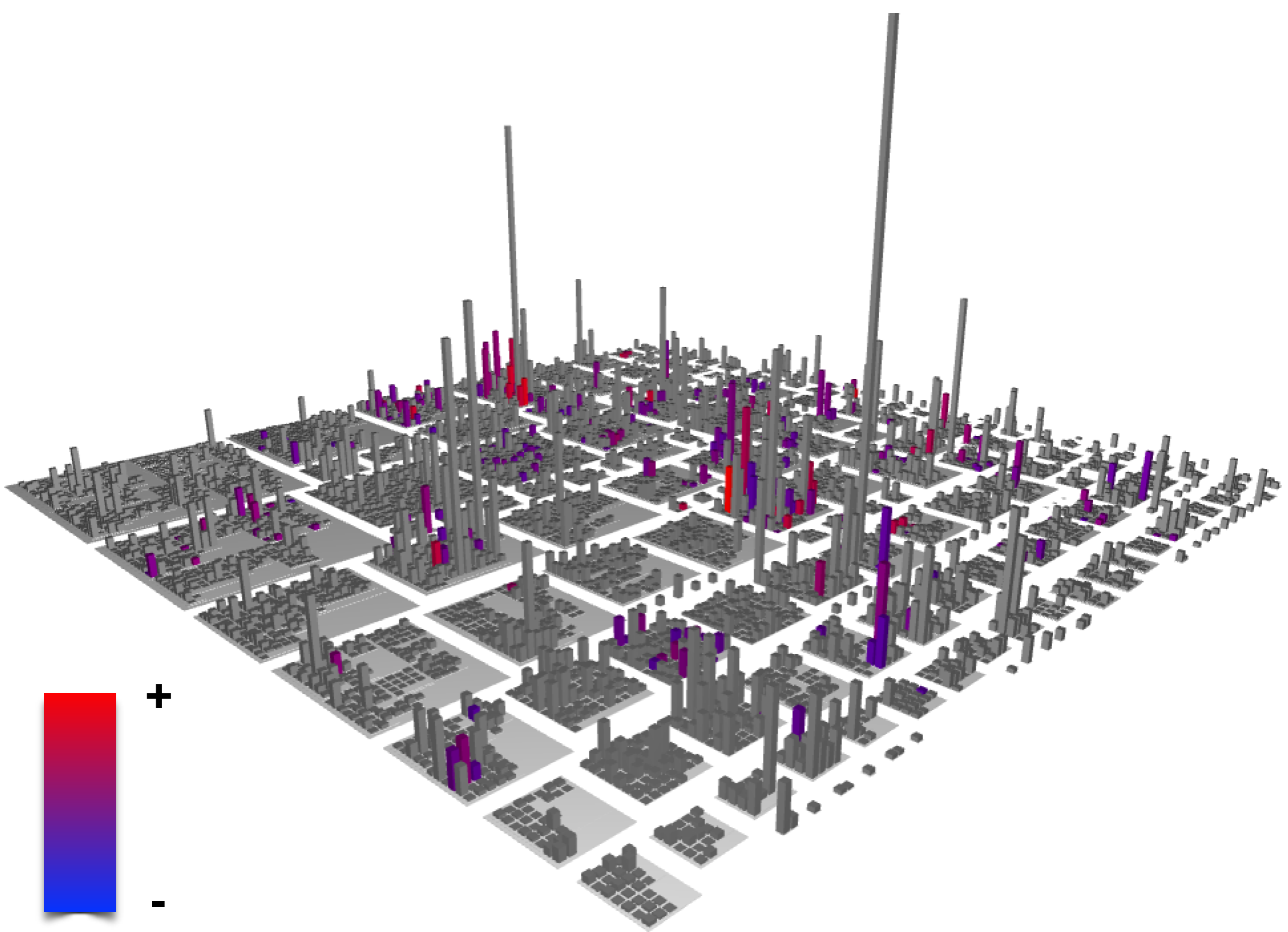
Using the Data



Find Patterns

Analyze Execution

Community



ShoreLine Does Not

Require time to install

Interrupt your workflow

Interfere with other tools

Future



Replicability



John Unruh 2001-01-04 13:50:53 PST

[Comment 1](#)

This worksforme. Make sure you have the MRJ plugin installed from <http://www.apple.com/java/>

I'm sorry that this is not a easily reproducible bug, but I'll be very happy if there's a workaround and it's described in the release notes.



Fabian Guisset 2001-01-18 11:37:45 PST

[Comment 1](#)

Could you please do the following :

- Give us the exact URL where you downloaded your bad build from.
- Download a latest build (<http://ftp.mozilla.org/pub/mozilla/nightly> from 18th january), delete your profile, and try to install it with a clean profile.

Errors like that tend to disappear as fast as they appear.
Thanks,
Fabian.



Oliver Jones 2001-01-18 04:58:18 PST

[Comment 2](#)

WTF! Now it starts working... What the hell is going on here? I've done NOTHING different. Weird beyond weirdness.

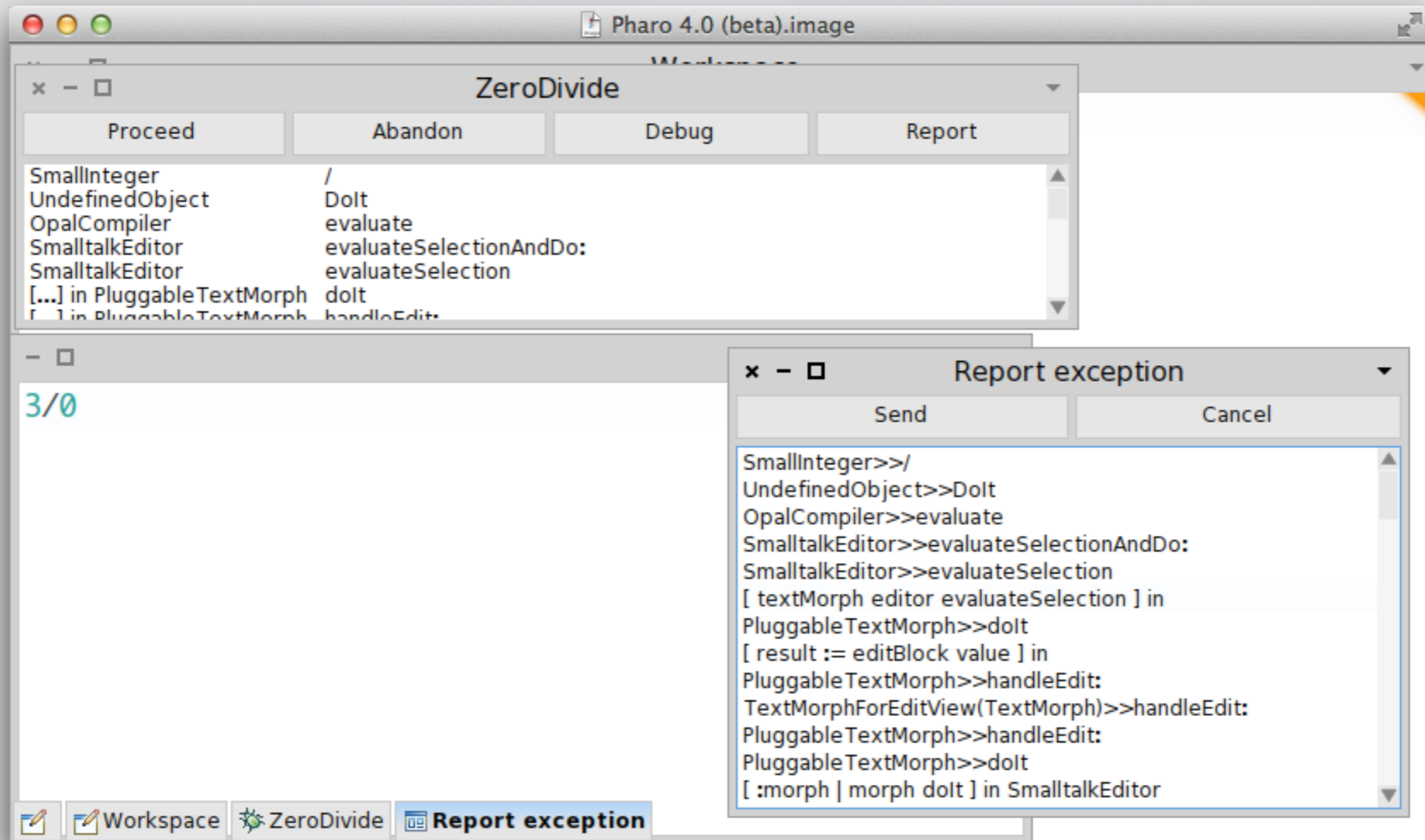


KLB 2013-11-03 17:29:18 PST

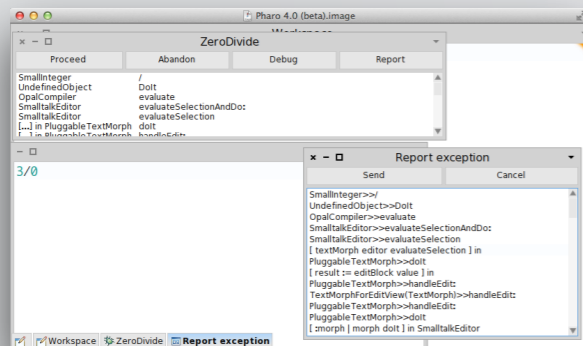
[Comment 6](#)

Are you still having problems with FF crashing on tumbler?

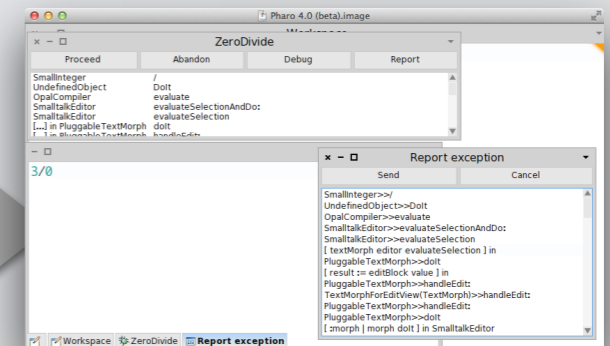
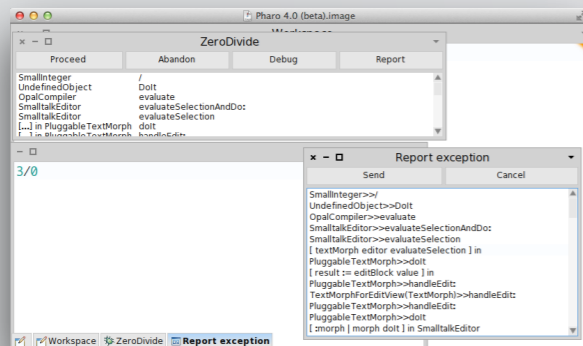
ShoreLine Reporter

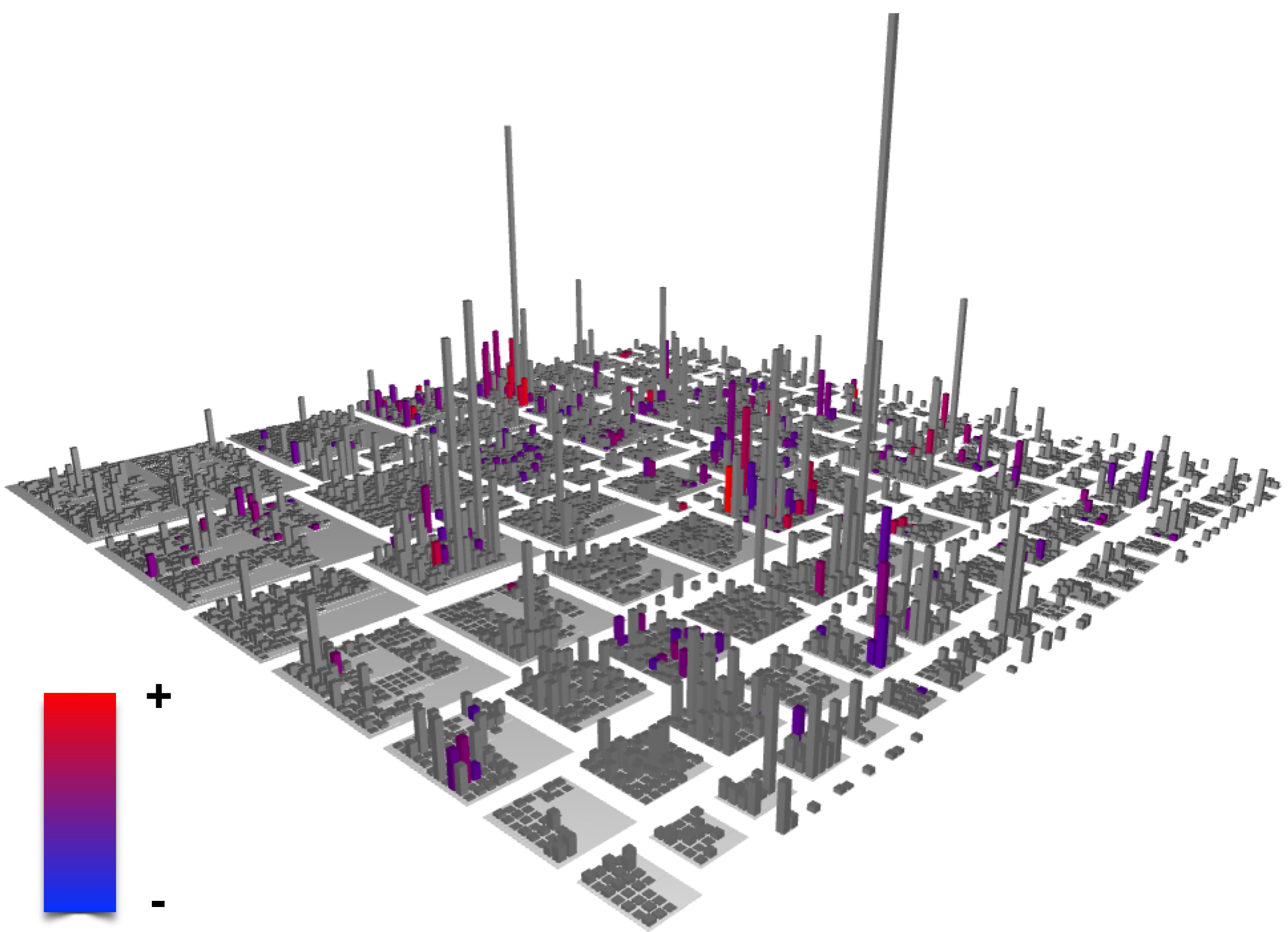


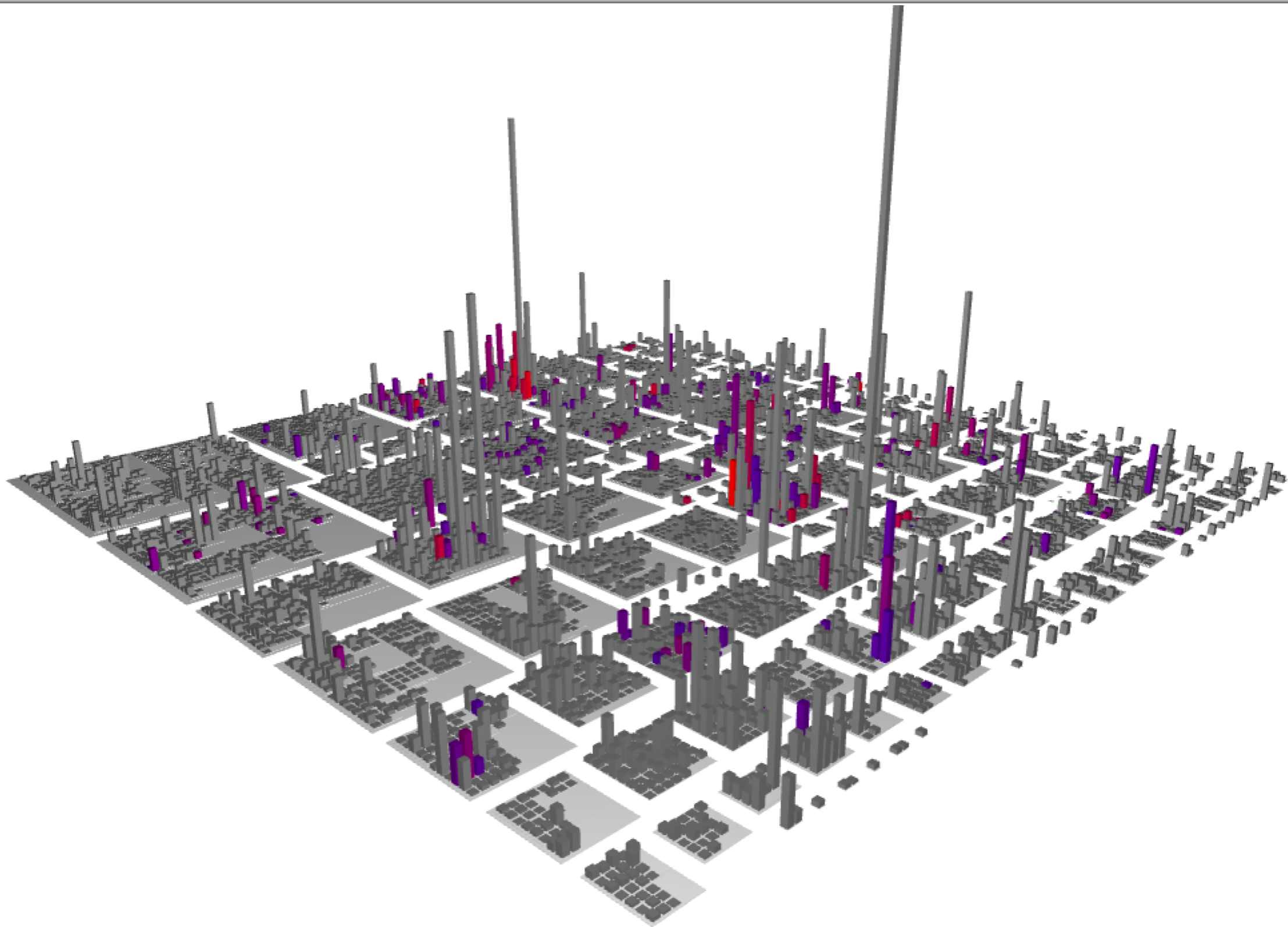
ShoreLine Reporter



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<http://www.smalltalkhub.com/#!/~dalsat/ShoreLine-Reporter>