

Don't look back in anger

Wie uns Historienanalyse dabei hilft, unsere Entwicklung zu verbessern

Java Forum Stuttgart - 6. Juli 2017

Dr. Dennis Pagano
🐦 @dennispagano

Ausschnitt aus meiner Historie

Forschung

- Analyse von Open Source Communities
- Historie von Code und Kommunikationsartefakten
- Kontinuierliches Einbeziehen von Nutzerfeedback in die Entwicklung



Praxis

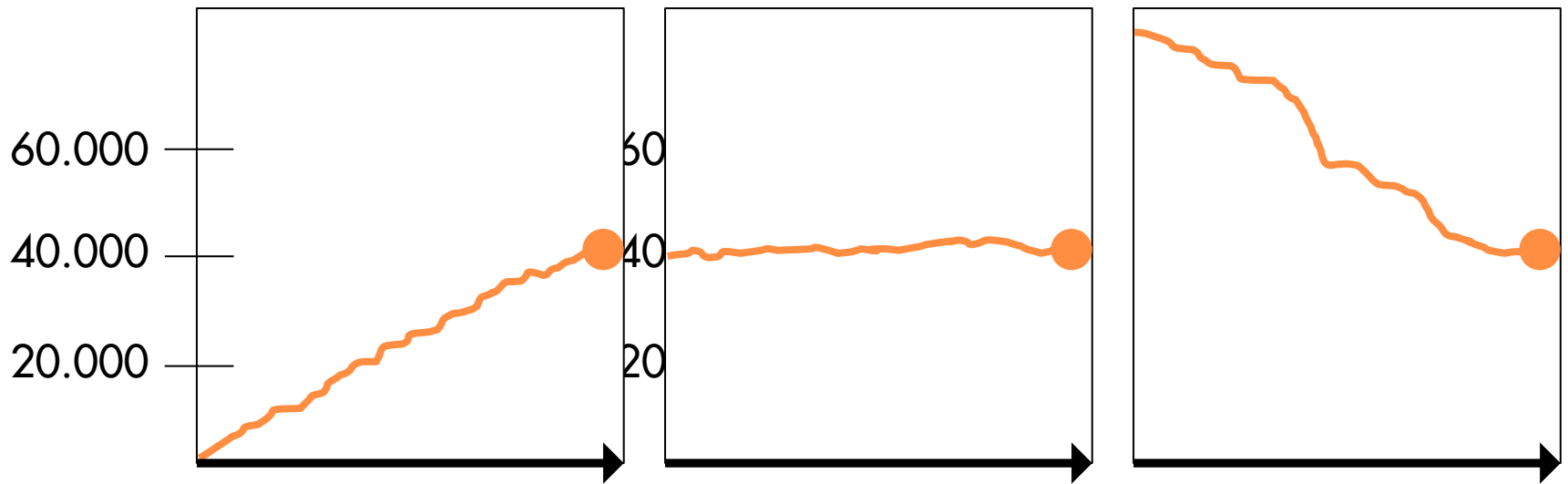
- Software Audits: Qualitätsbewertung
- Kontinuierliche Qualitäts- und Testkontrolle
- Entwicklung: Historisierte Qualitätsanalysen in Echtzeit



Hilfe, unser System hat 42.000 Findings!



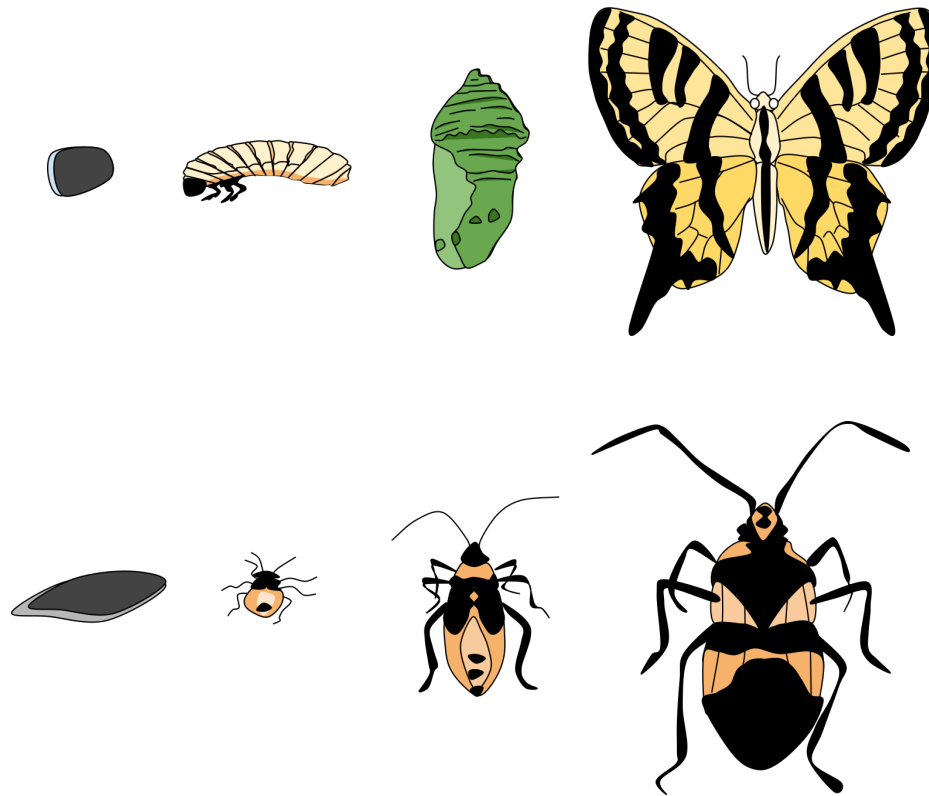
Sind 42.000 Findings schlecht?

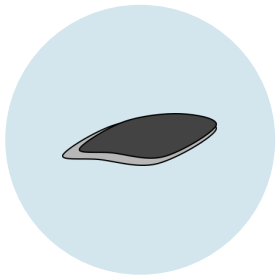


Qualitätsziel?

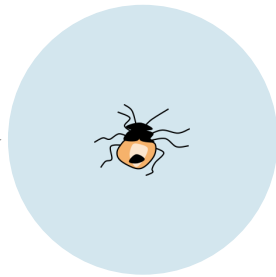


Die Entstehung der aktuellen Version
ist entscheidend für die richtige Reaktion





Team-Wechsel

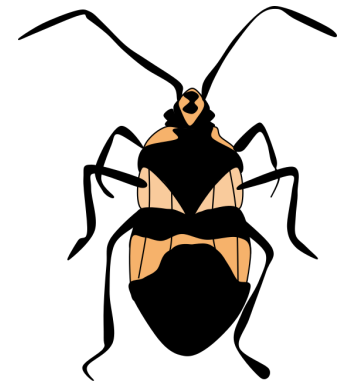


Code-Ownership



Inkonsistenter Klon

Head-Analyse



Bug

Historien-Analyse



Agenda

1

Welche Probleme verrät die Historie?

2

Was kann man im eigenen Projekt machen?

Die Historie verrät, wie sich das Team entwickelt hat.





Entwickler

feilkas
stemplinger
plachot
sahinagic
bader
malinskyi
ribeiro
svejda
hodale
amann
kanis
junker
steidl
streitel
beller
hauptmab
deissenb
hummelb
heineman
poehlman
juergens

Sporadische Committer

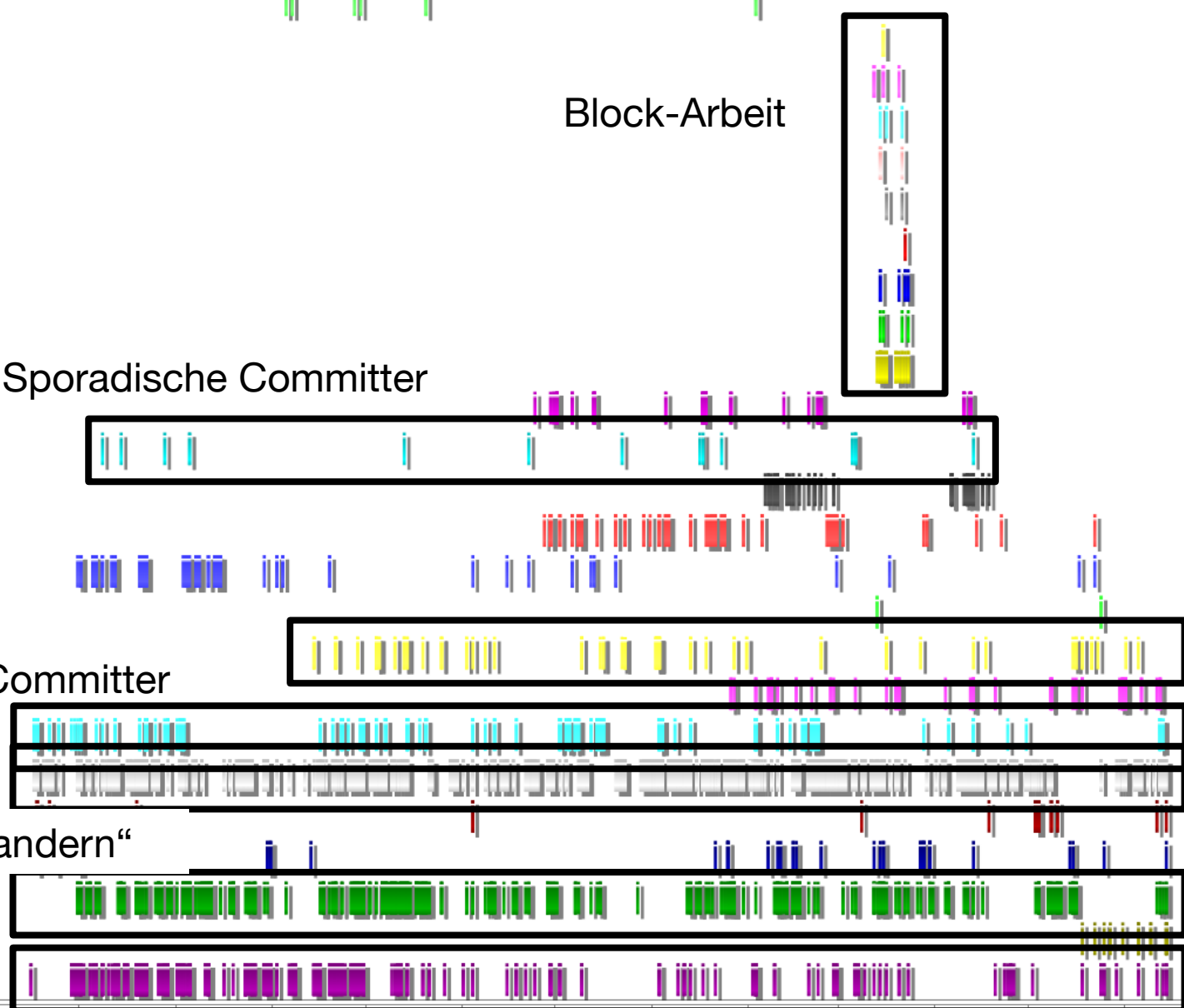
Block-Arbeit

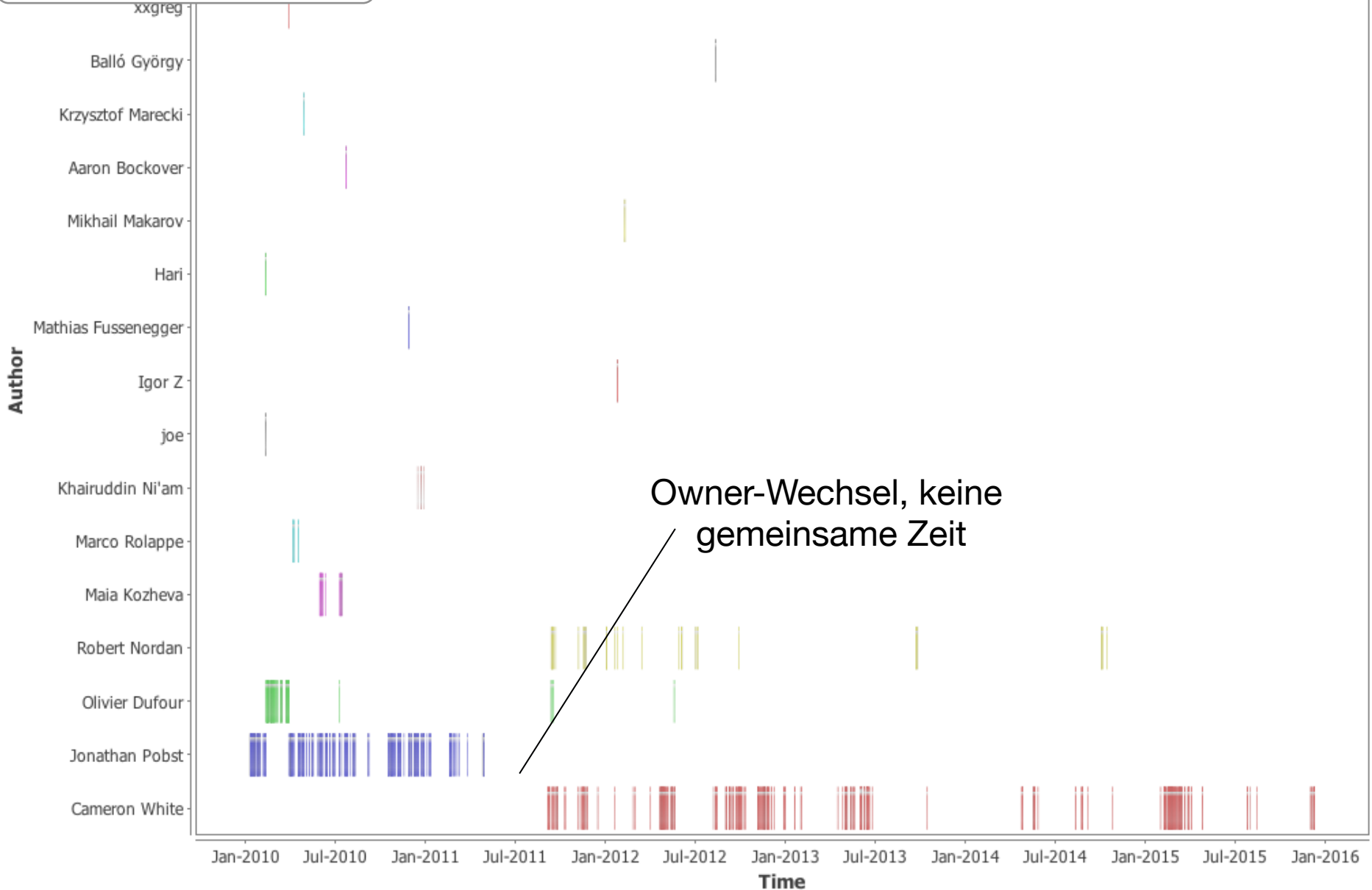
Haupt-Committer

„Abwandern“

Jun-2011 Jul-2011 Aug-2011 Sep-2011 Okt-2011 Nov-2011 Dez-2011 Jan-2012 Feb-2012 Mrz-2012 Apr-2012 Mai-2012 Jun-2012 Jul-2012

Zeit

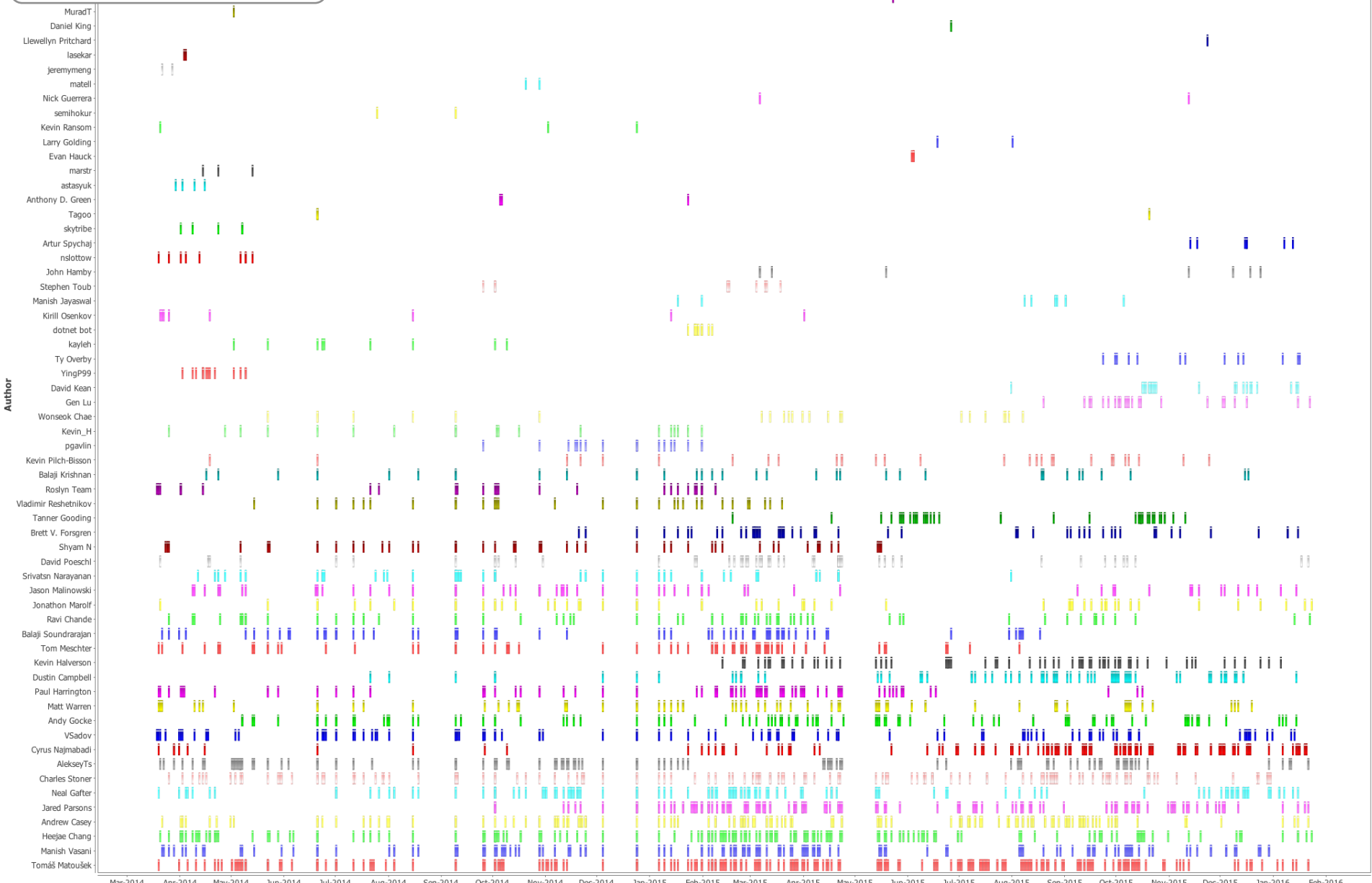




Owner-Wechsel, keine gemeinsame Zeit



dotnet/roslyn



- Tomáš Matoušek ■ Manish Vasani ■ Heejae Chang ■ Andrew Casey ■ Jared Parsons ■ Neal Gafter ■ Charles Stoner ■ AlekseyTs ■ Cyrus Najmabadi ■ VSadov ■ Andy Gocke ■ Matt Warren ■ Paul Harrington ■ Dustin Campbell ■ Kevin Halverson ■ Tom Meschter ■ Balaji Soundararajan ■ Ravi Chande ■ Jonathon Marolf ■ Jason Malinowski ■ Srivatsn Narayanan ■ David Poeschl ■ Shyam N ■ Brett V. Forsgren ■ Tanner Gooding ■ Vladimir Reshetnikov ■ Roslyn Team ■ Balaji Krishnan ■ Kevin Pilch-Bisson ■ pgavlin ■ Kevin_H ■ Wonseok Chae ■ Gen Lu ■ David Kean ■ YngP99 ■ Ty Overby ■ kayleh ■ dotnet bot ■ Kirill Osenkov ■ Manish Jayaswal ■ Stephen Toub ■ John Hamby ■ nslottow ■ Artur Spychaj ■ skytribe ■ Tagoo ■ Anthony D. Green ■ astasyuk ■ marstr ■ Evan Hauck ■ Larry Golding ■ Kevin Ransom ■ semihokur ■ Nick Guerrero ■ matell ■ jeremymeng ■ lasekar ■ Llewellyn Pritchard ■ Daniel King ■ MuradT ■ Matt Mitchell ■ Eric Feverson ■ Tristan Labelle ■ Patrick Nelson ■ weswigham ■ Kent Boogaart



jenkinsci/jenkins



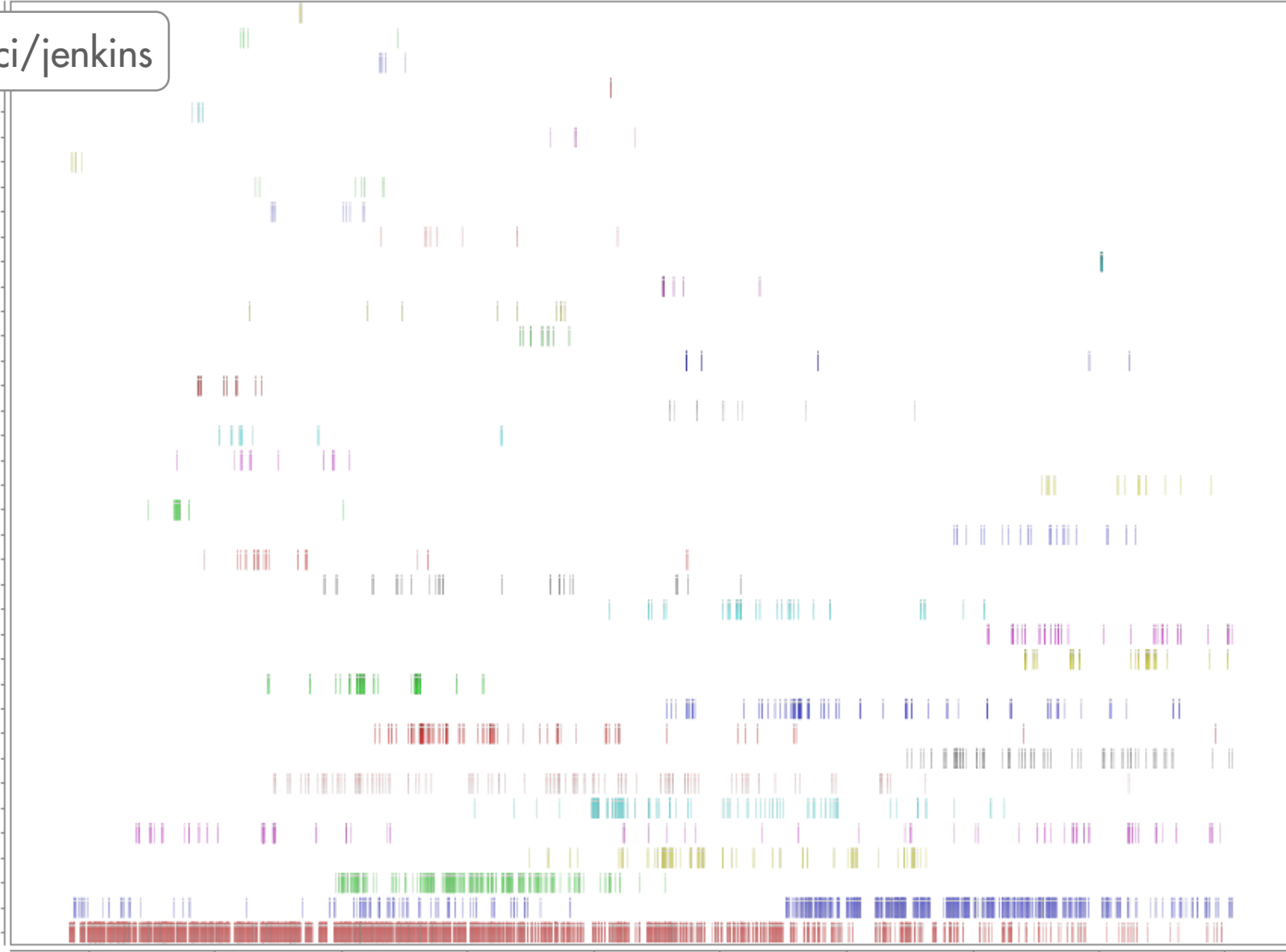
- Kohsuke Kawaguchi ■ Jesse Glick ■ Alan Harder ■ Stephen Connolly ■ Christoph Kutzinski ■ Olivier Lamy ■ Seiji Sogabe ■ Oliver Gondzo ■ Andrew Bayer ■ Nicolas De Loof ■ Huybrechts ■ Oleg Nenashv ■ Daniel Beck ■ dty ■ CloudBees DEV@Cloud ■ redsolo ■ Jbq ■ Vojtech Juranek ■ dvrzalik ■ cactusman ■ tfennelly ■ dwdyer ■ imod ■ vjuranek ■ Richard Mortimer
- StevenBrown ■ Jerome Lacoste ■ swiest ■ christ66 ■ martinfickler ■ pgweiss ■ imdonohue ■ vsizkov ■ kutzi ■ rseguy ■ bwestrich ■ Brian Atkinson ■ kaxelson ■ jheymans ■ Ivotypko ■ Fred G ■ shinodkm ■ James Nord ■ Stefan Wolf ■ Ulli Hafner ■ André Twupack ■ lacostej ■ Tom Fennelly ■ jasper ■ petehayes ■ OHTAKE Tomohiro ■ Jacob_robertson
- Erik Molekamp ■ Christian Wolfgang ■ km ■ ikedam ■ brucechapman ■ ramapularvarthi ■ Ryan Campbell ■ wyukawa ■ draco2k8 ■ xlv ■ jasonchaffee ■ Nathan Parry ■ jpederzoli ■ Robert Elliot ■ Erik Ramfelt ■ fujabee ■ Harald Albers ■ samngms ■ rtyler ■ rbair ■ Jesse Farinacci ■ bruyeron ■ Vojtěch Juránek ■ godin ■ mode ■ Giulio D'Ambrosi ■ wolfs ■ bap2000
- Martinj Baay ■ mdillon ■ Vincent Latombe ■ wjprakash ■ drulll ■ ashlux ■ frizbog ■ Emanuele Zattin ■ Tomer Cohen ■ Dean Yu ■ teilo ■ Arnaud Héritier ■ dnodolny ■ stigkj ■ Sam Van Oort ■ dodok1 ■ Dominik Bartholdi ■ Tom Rini ■ Reynald Borer ■ Andrew Bradley ■ Stephen Ware ■ Stefan Brausch ■ kbartelson ■ Craig P. Motlin ■ Michael Strasser ■ Greg Heartsfield
- elefevre ■ vincentkok ■ Alexandre Garnier ■ baptiste ■ David Reiss ■ Alex Earl ■ John Crawford ■ Kanstantsin Shautsov ■ Sami Tikka ■ René Moser ■ Richard Bywater ■ ertanden ■ olivergondza ■ Brad Trimby ■ Olav Reinert ■ vojtechhabarta ■ mcrooney ■ marco ■ david_calavera ■ lucaspanjer ■ Nigel Magnay ■ Joe Sondow ■ mleinart ■ mriedenhagen ■ Ken Bertelson
- Thorsten Möllers ■ Mike Robinet ■ Marc Guenther ■ Andrew Melo ■ Jørgen P. Tjørna ■ Josh Gibbs ■ tblack ■ vlatombe ■ jtnord ■ Michael Clarke ■ boev ■ dwliden ■ digerata ■ Bruno P. Kinoshita ■ Ben Lau ■ Dave Hunt ■ Rob Petti ■ Paul Weiss ■ mstarzyk ■ Ben McCann ■ lifeless ■ javadude ■ Rafa de la Torre ■ vglushenkov ■ davidmc24 ■ Paul Sandoz ■ Eric Dalquist
- davidseymore ■ jsirola ■ Bruno Meneguello ■ GLundh ■ Christoph Thelen ■ f_cavaretta ■ Ciprian Ciobotariu ■ Stuart McCulloch ■ Lucien Weller ■ willemv ■ jhm ■ Surya Gaddipati ■ valentina ■ Jonathan A. Stenberg ■ Kevin Sawicki ■ Yoann Dubreuil ■ baileys



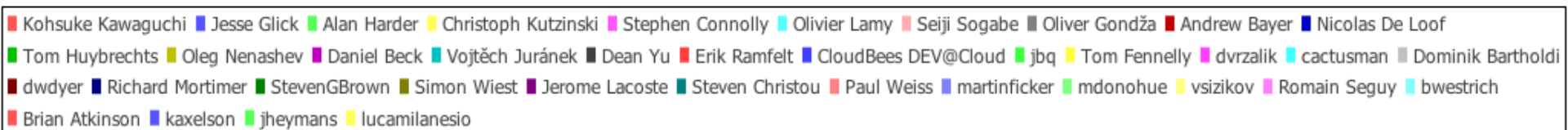
jenkinsci/jenkins

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- Tom Huybrechts
- Nicolas De Loof
- Andrew Bayer
- Oliver Gondža
- Seiji Sogabe
- Olivier Lamy
- Stephen Connolly
- Christoph Kutzinski
- Alan Harder
- Jesse Glick
- Kohsuke Kawaguchi



Time





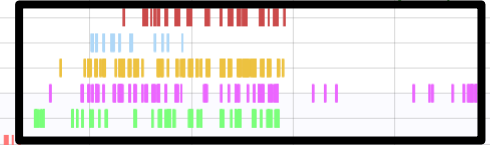
Kundenprojekt



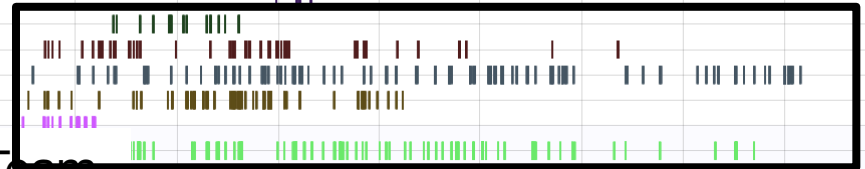


Kundenprojekt

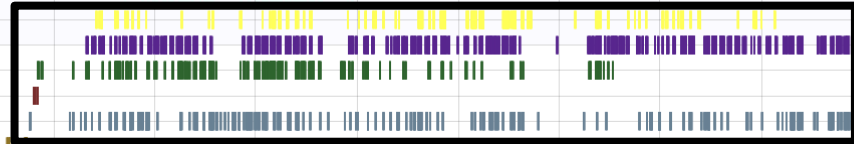
Neues Team



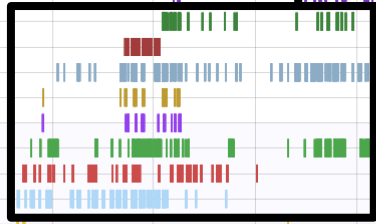
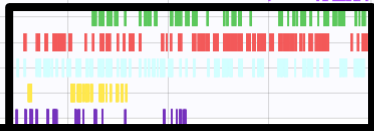
Neues Team



Neues Team



Neues Team



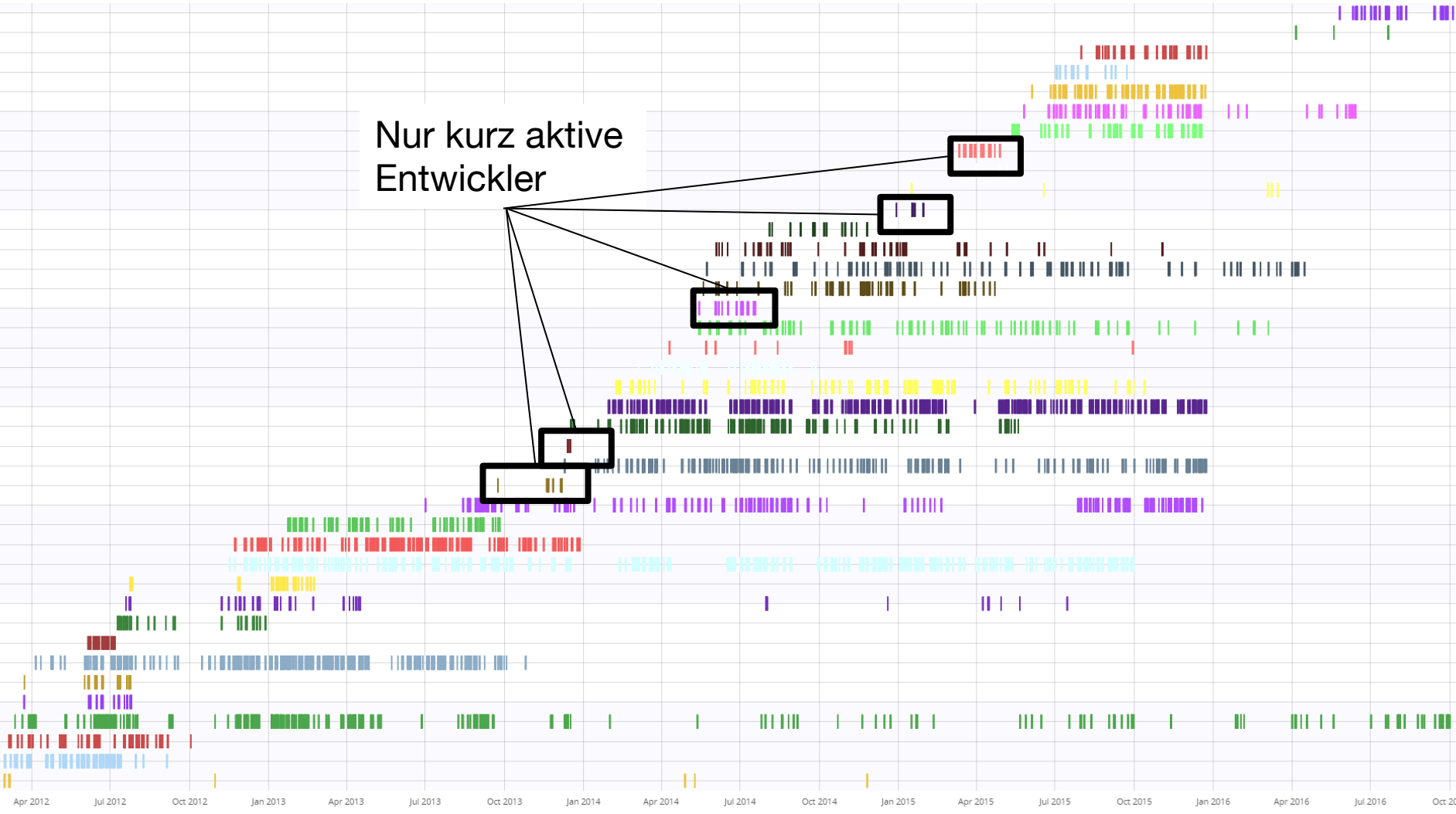
Jul 2013 Oct 2013 Jan 2014 Apr 2014 Jul 2014 Oct 2014 Jan 2015 Apr 2015 Jul 2015 Oct 2015 Jan 2016 Apr 2016 Jul 2016 Oct 2016

Teilweise Phase-Out



Kundenprojekt

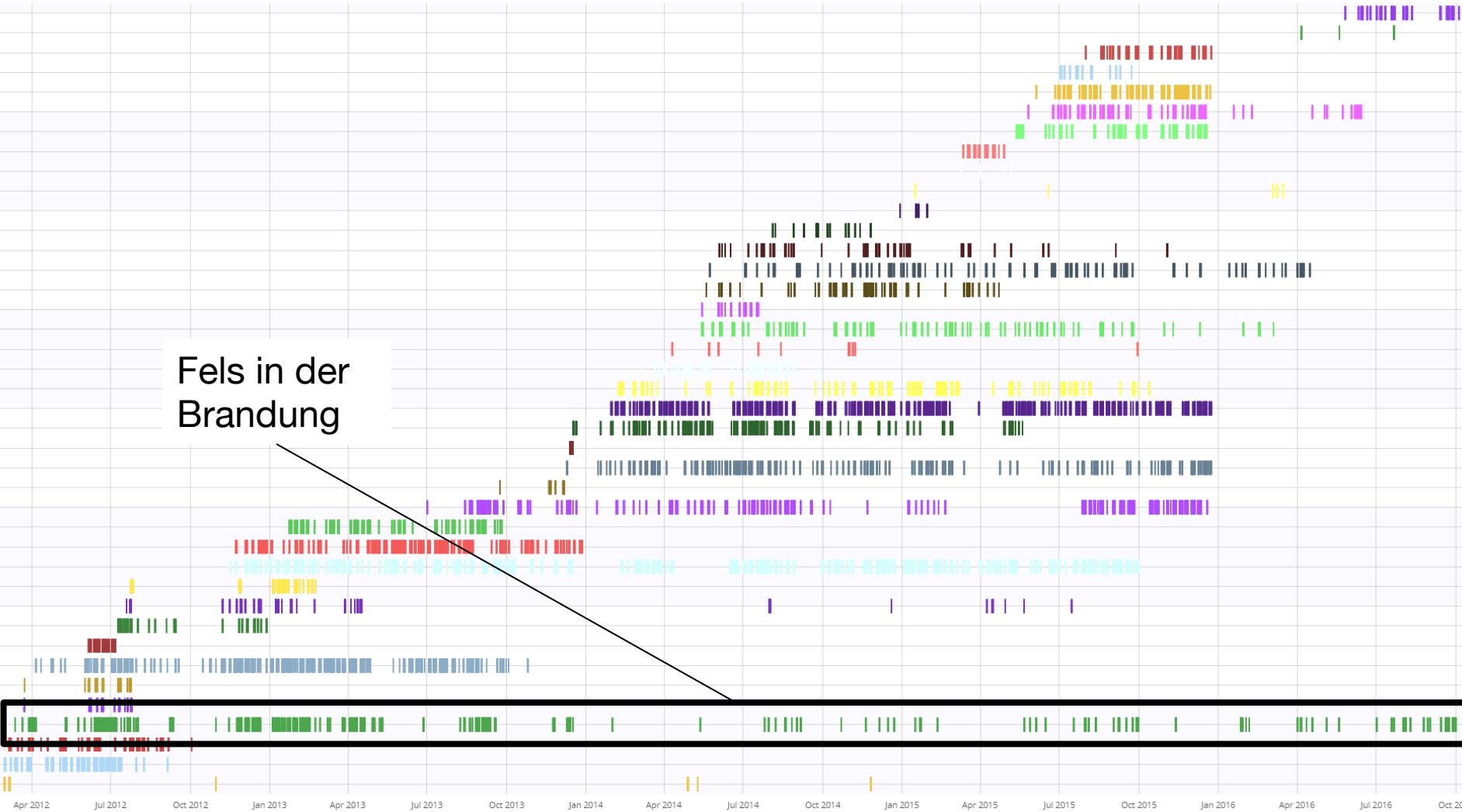
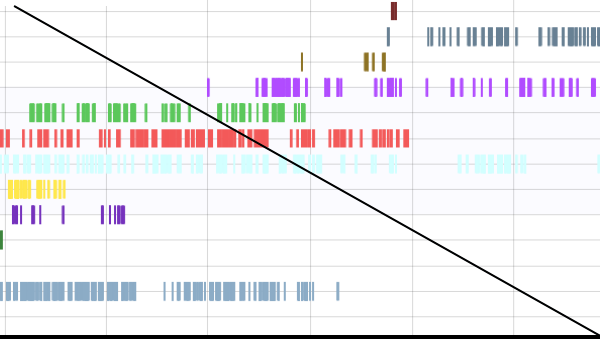
Nur kurz aktive
Entwickler



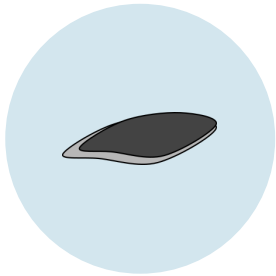


Kundenprojekt

Fels in der Brandung



Apr 2012 Jul 2012 Oct 2012 Jan 2013 Apr 2013 Jul 2013 Oct 2013 Jan 2014 Apr 2014 Jul 2014 Oct 2014 Jan 2015 Apr 2015 Jul 2015 Oct 2015 Jan 2016 Apr 2016 Jul 2016 Oct 2016



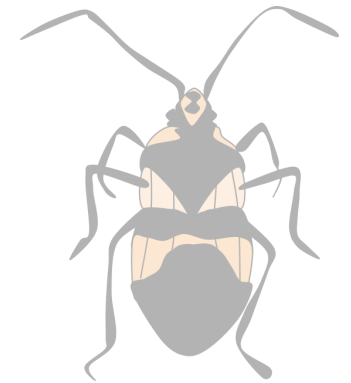
Team-Wechsel



Code-Ownership

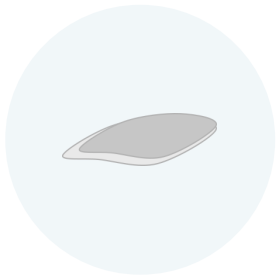


Inkonsistenter Klon

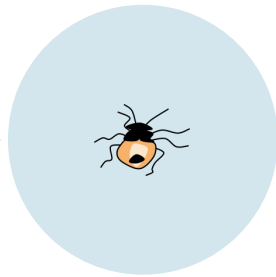


Bug

Historien-Analyse



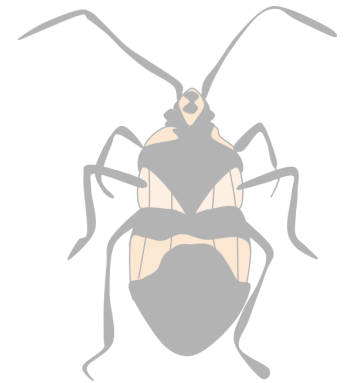
Team-Wechsel



Code-Ownership



Inkonsistenter Klon



Bug

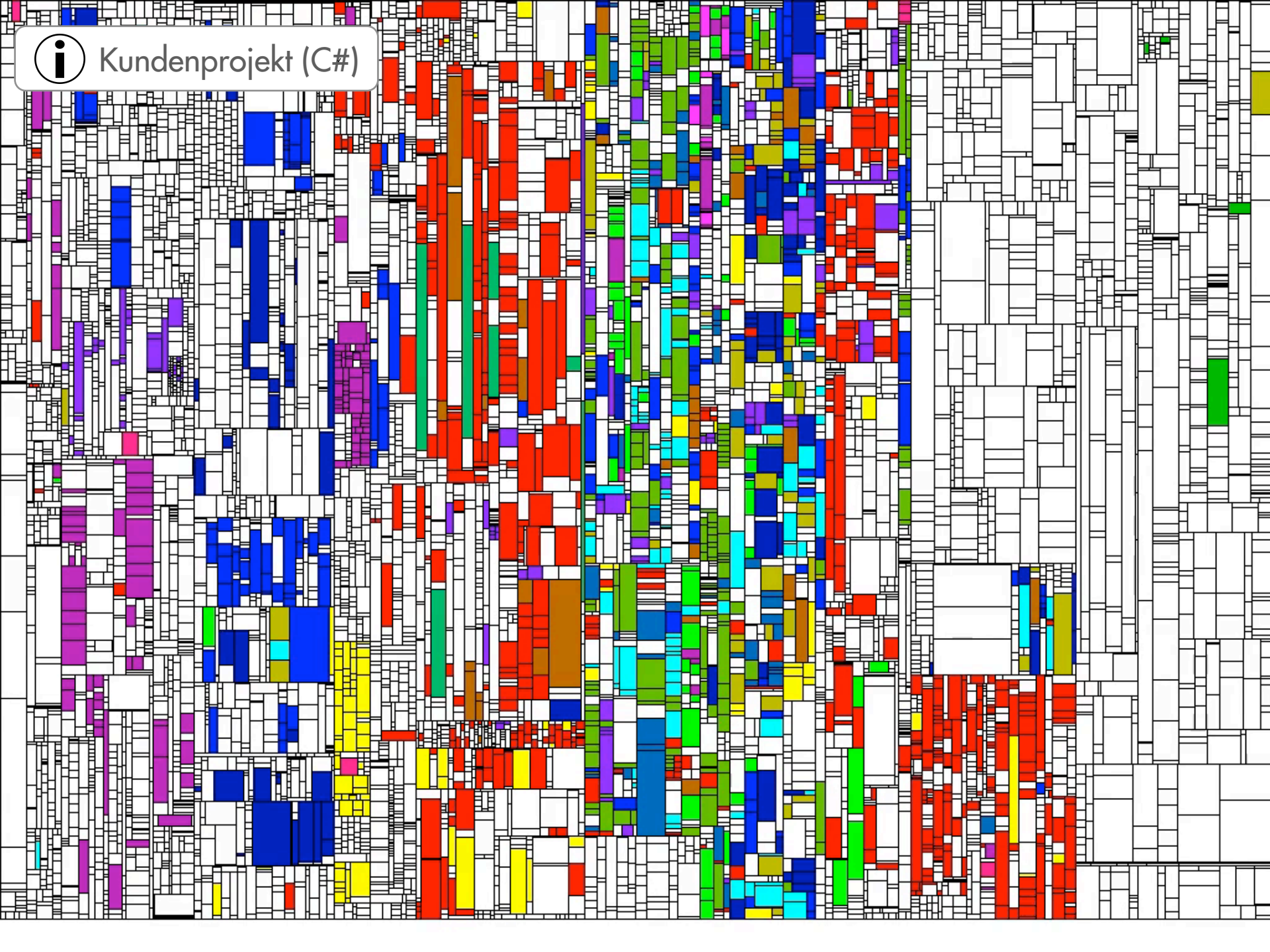
Historien-Analyse

Die Historie verrät, wer welchen Code kennt.





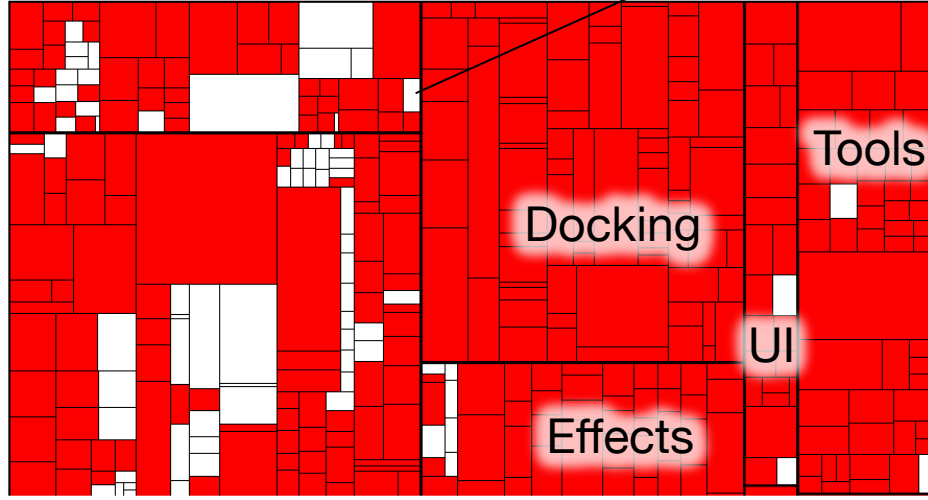
Kundenprojekt (C#)





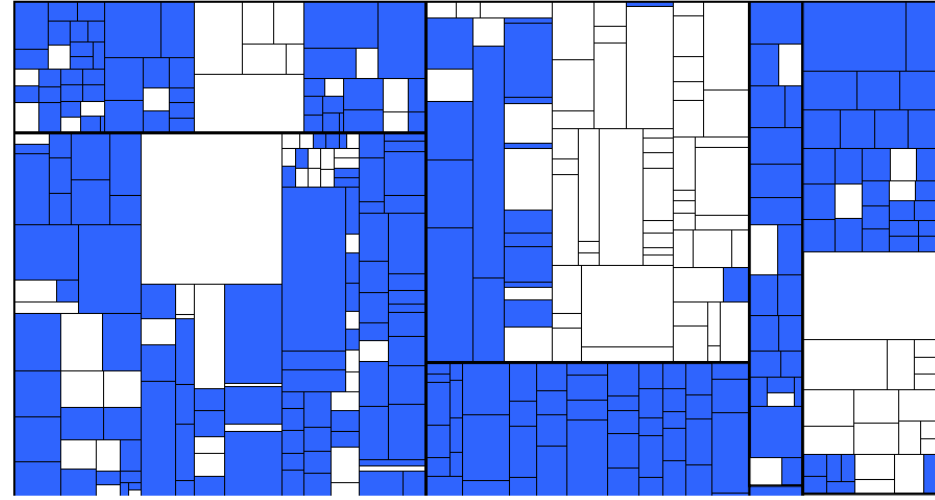
Wissenslücke

Ownership Cameron White (#1)

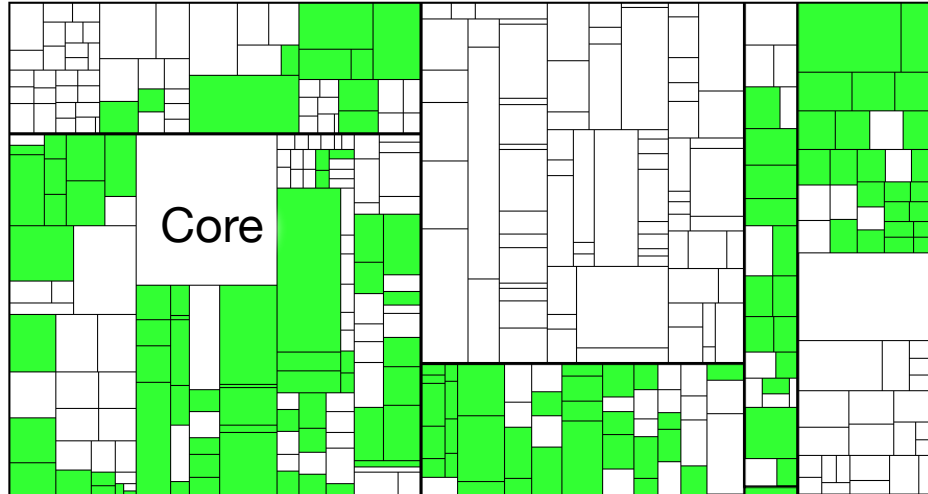


„Abgewandert“

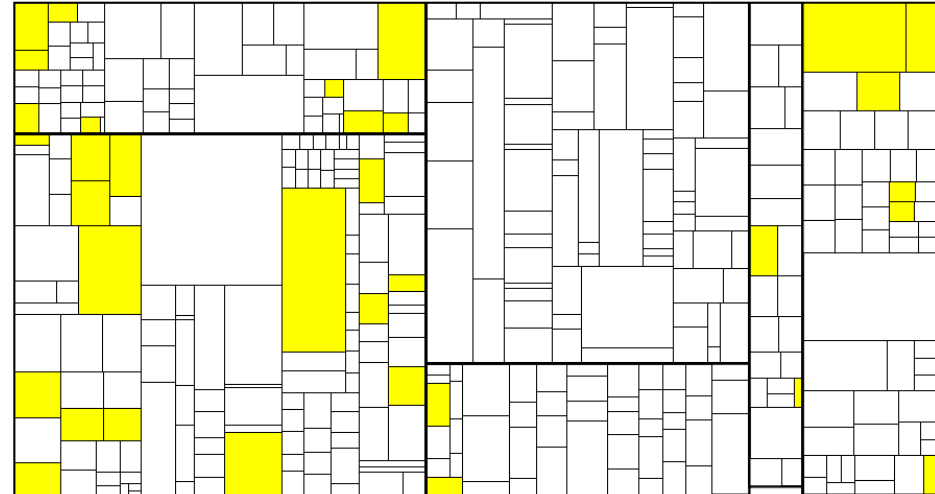
Ownership Jonathan Pobst (#2)



Ownership Olivier Dufour (#3)

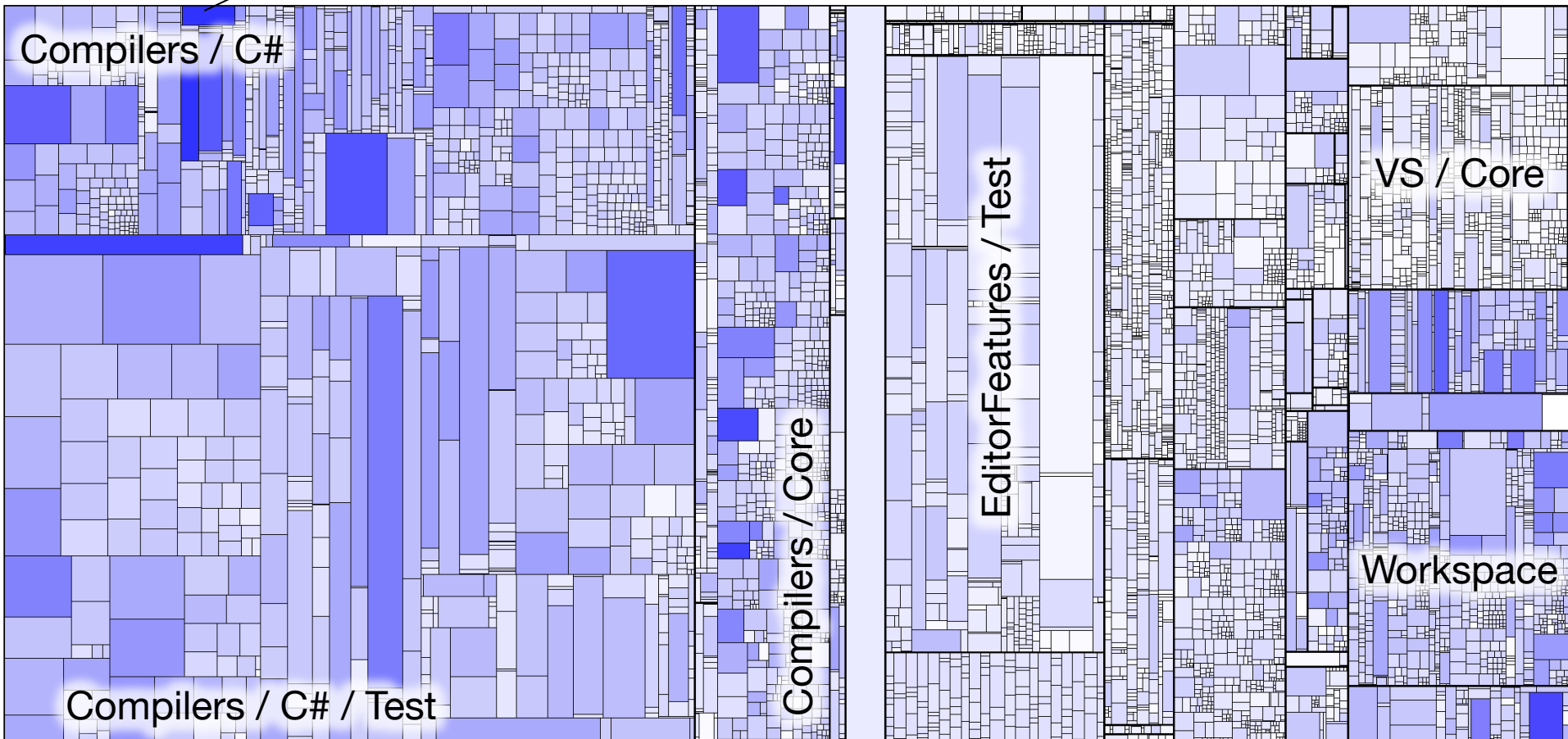


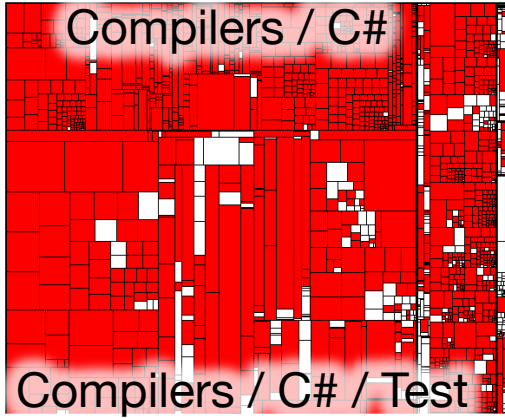
Ownership Robert Nordan (#4)



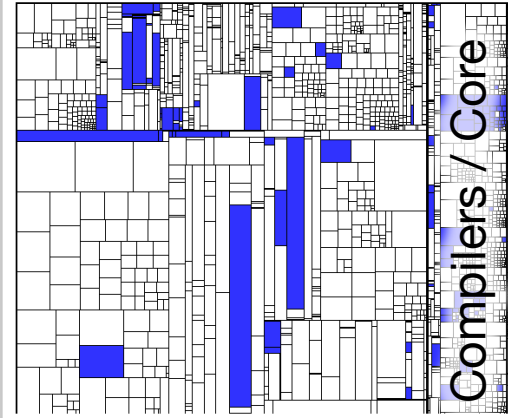
CSharpCommandLineParser.cs (47 Entwickler)

Ownership Distribution

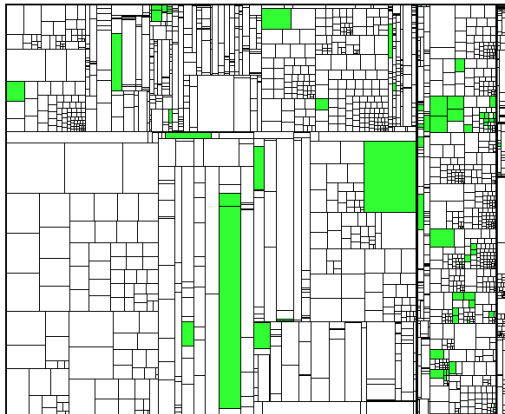
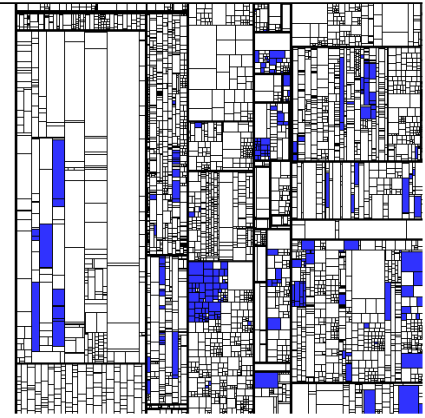




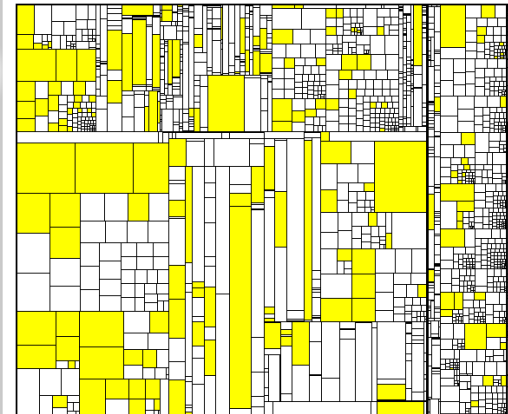
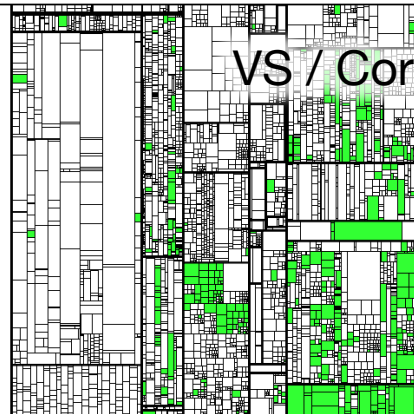
Ownership Tomáš Matoušek (#1)



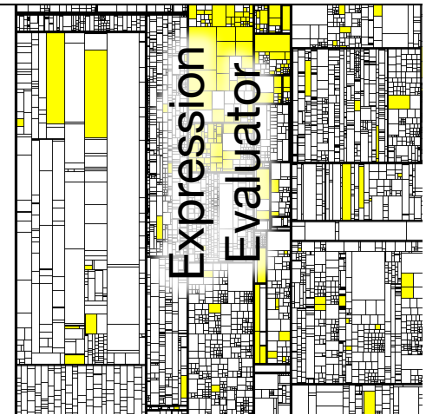
Ownership Manish Vasani (#2)



Ownership Heejae Chang (#3)



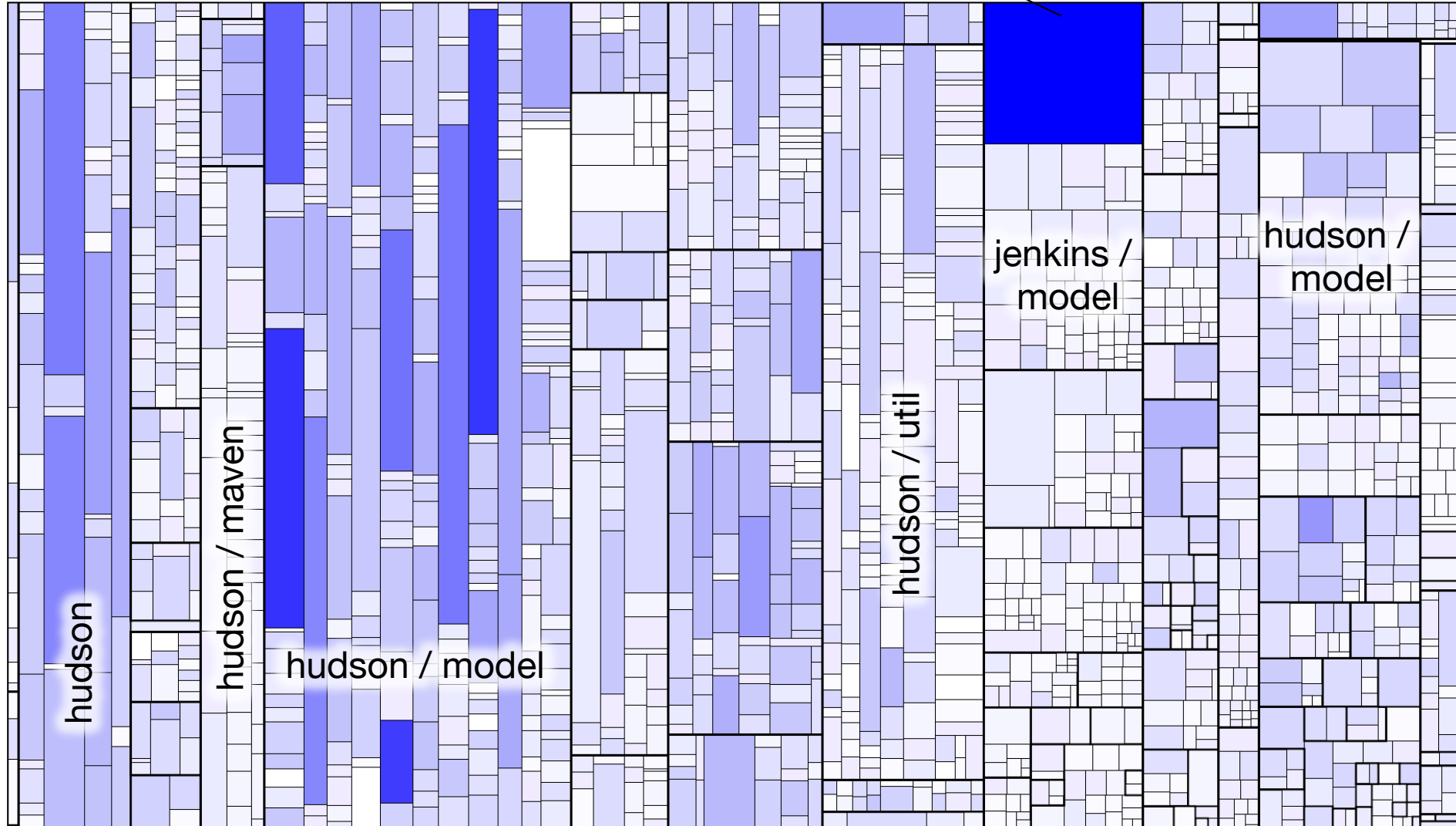
Ownership Andrew Casey (#4)



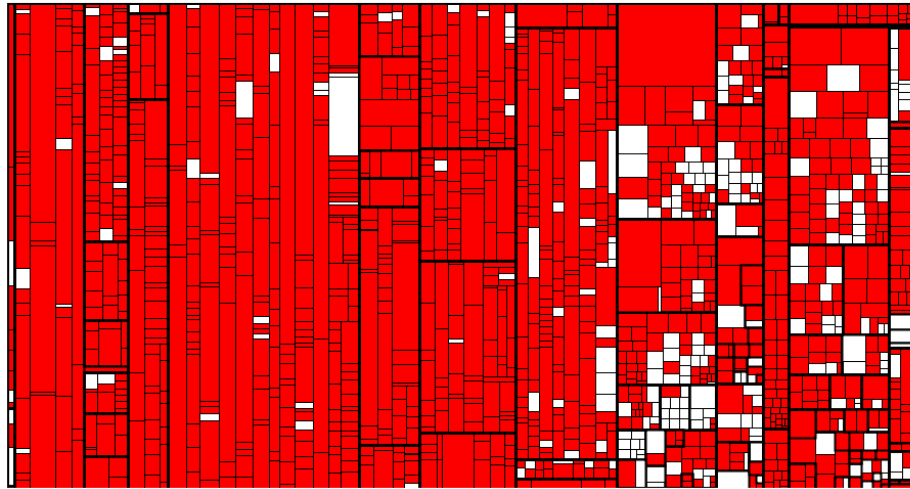


jenkins/model/Jenkins.java (48 Entwickler)

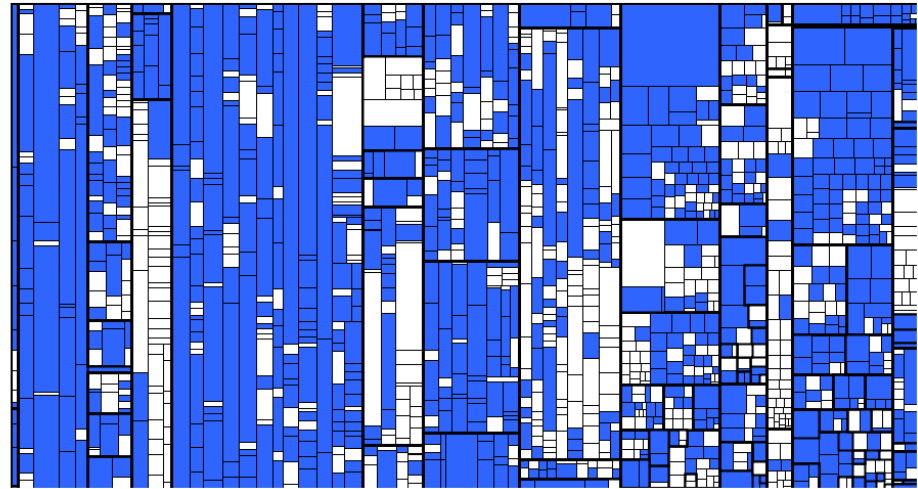
Ownership Distribution for jenkins



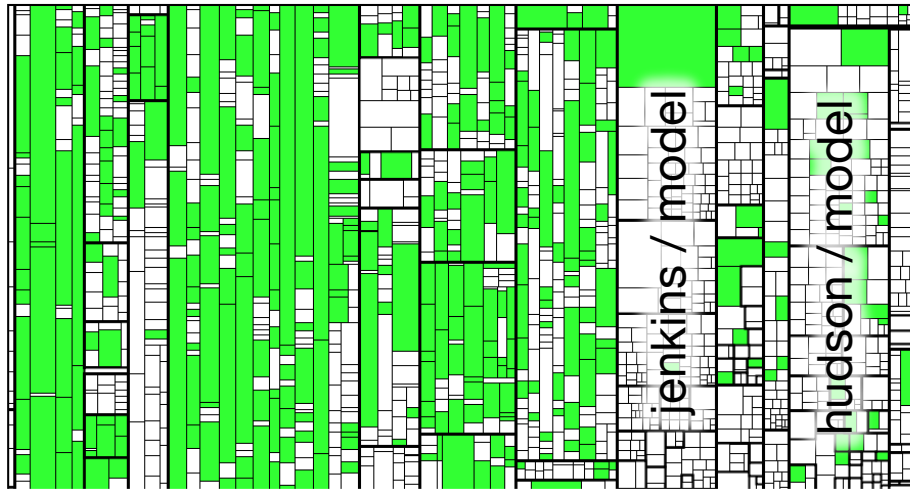
Ownership Kohsuke Kawaguchi (#1)



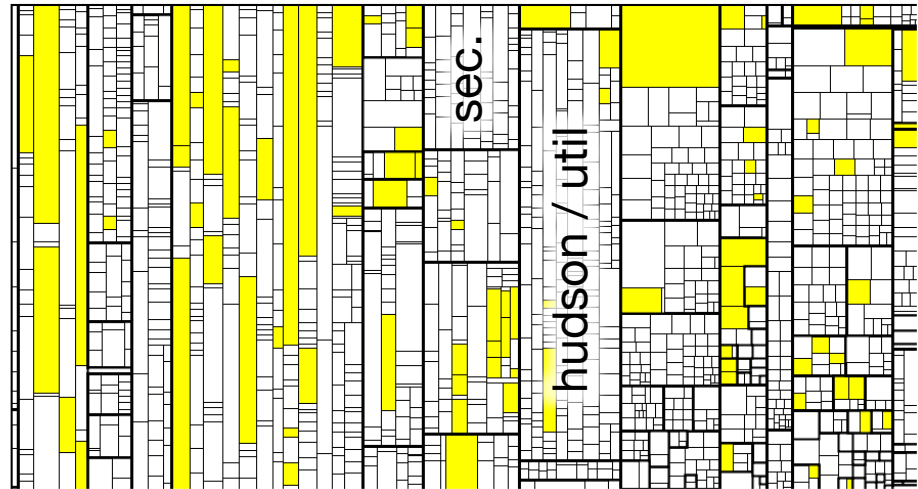
Ownership Jesse Glick (#2)

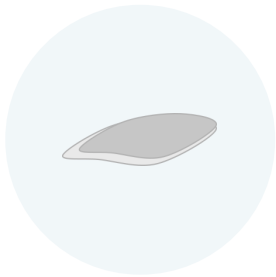


Ownership Alan Harder (#3)

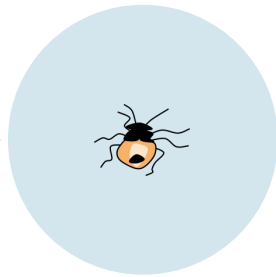


Ownership Christoph Kutzinski (#4)





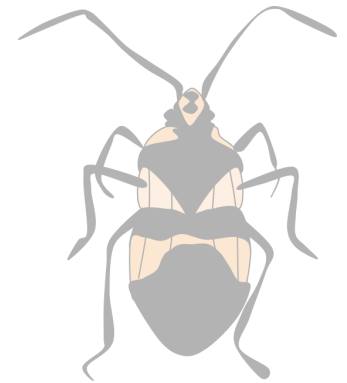
Team-Wechsel



Code-Ownership

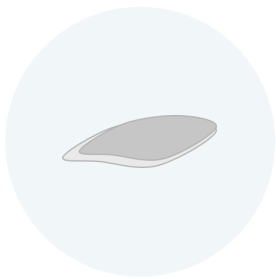


Inkonsistenter Klon



Bug

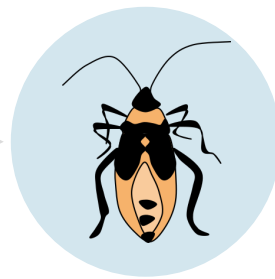
Historien-Analyse



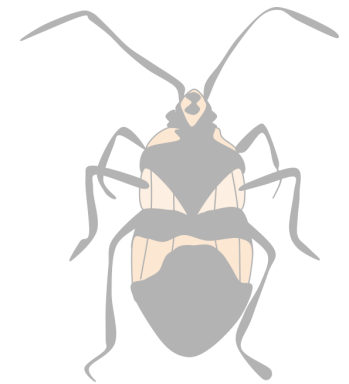
Team-Wechsel



Code-Ownership



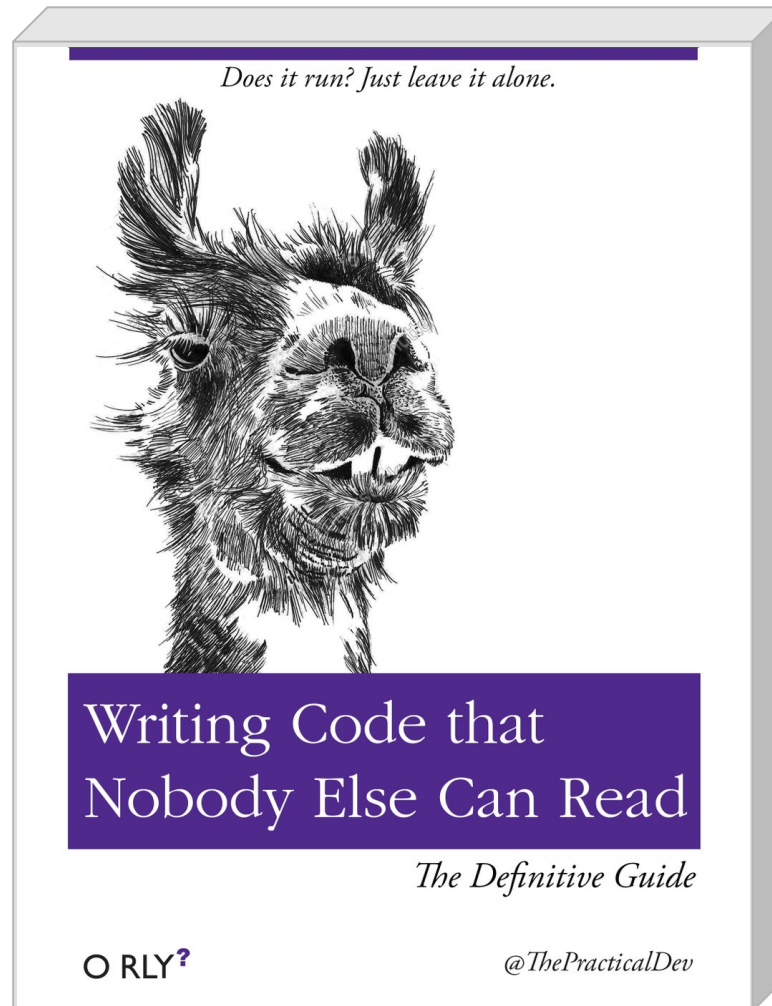
Inkonsistenter Klon

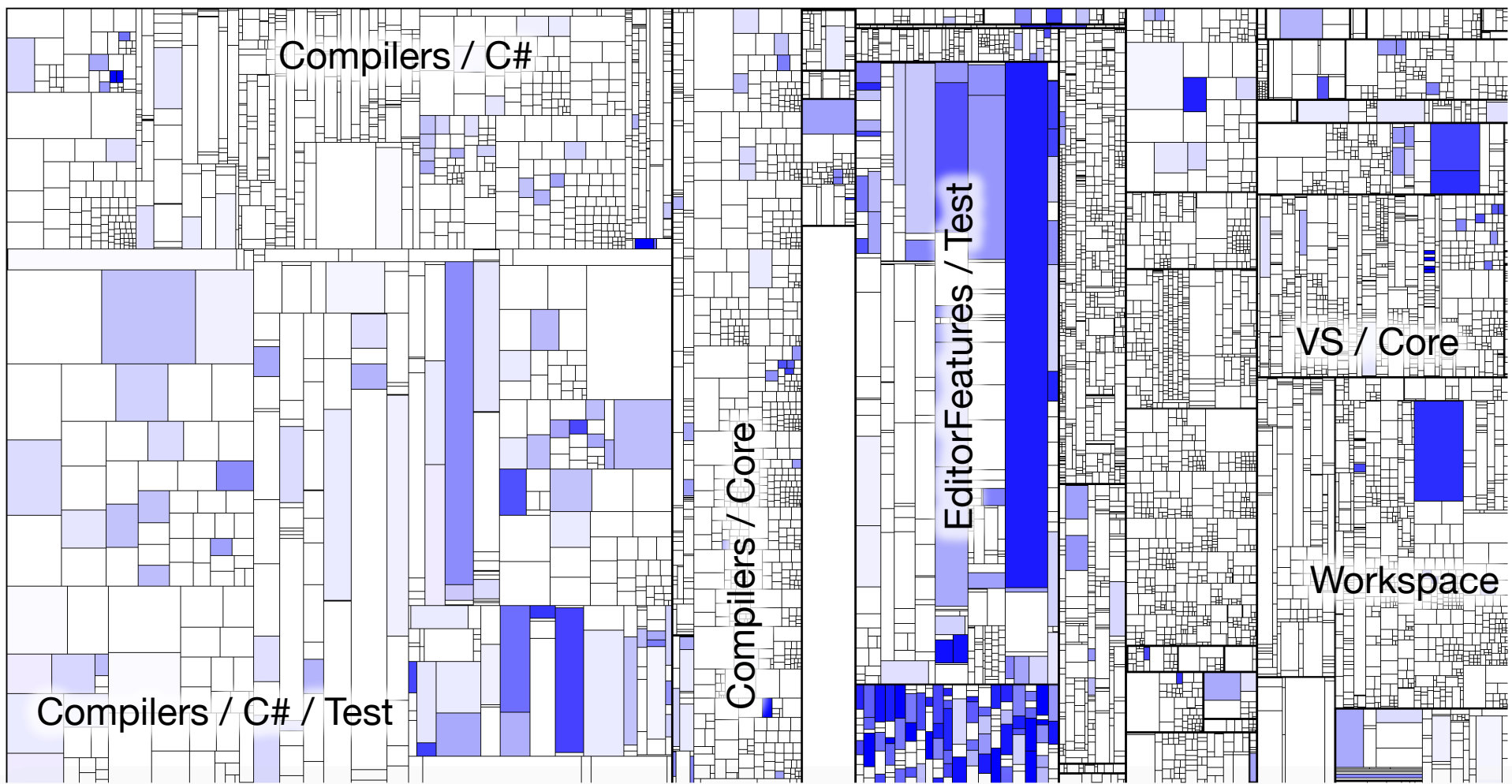


Bug

Historien-Analyse

Die Historie verrät, wie sich die Qualität entwickelt hat.





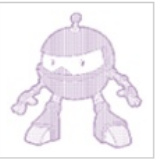
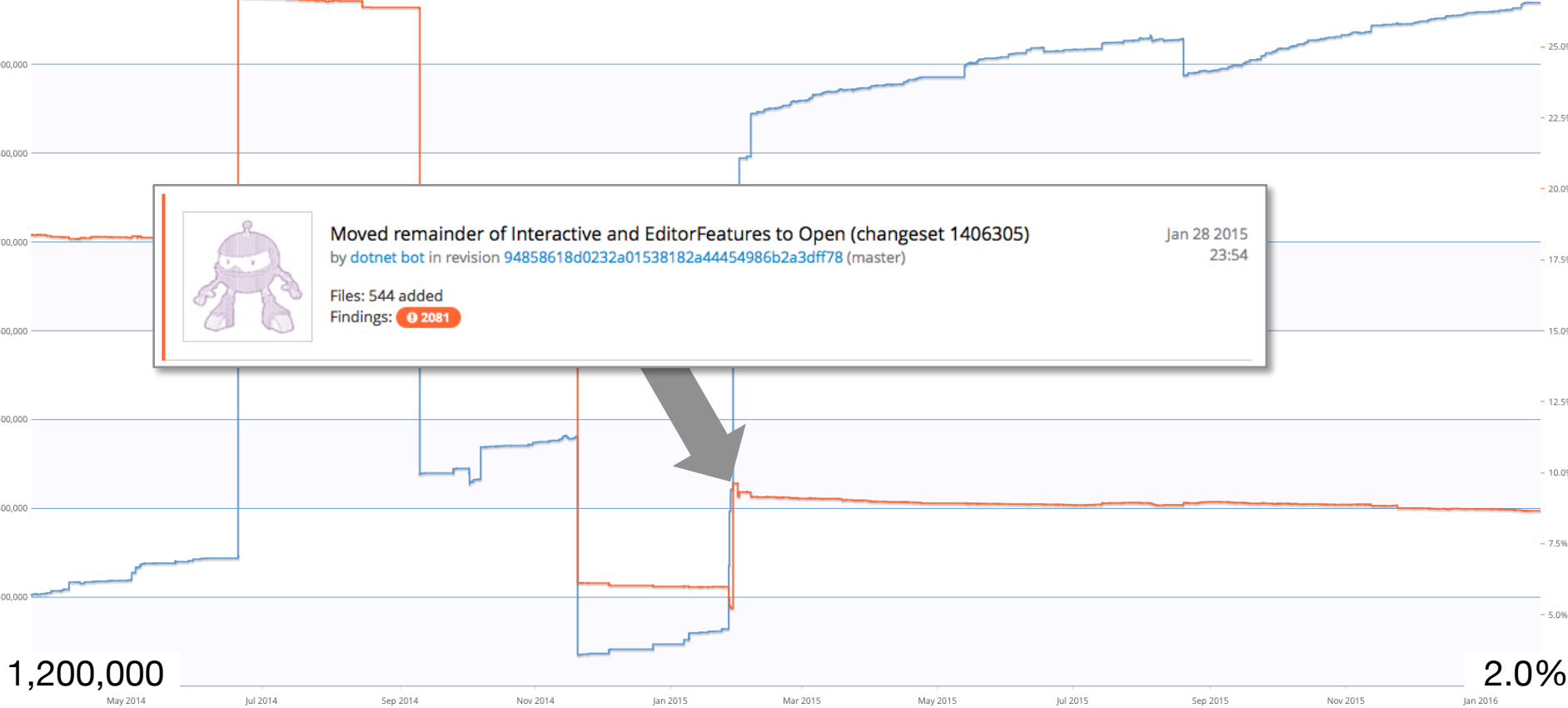
Head (Feb 2016)
Klonüberdeckung: 8,7%



LOC vs. Clone Coverage for roslyn-c

2,000,000

27.5%



Moved remainder of Interactive and EditorFeatures to Open (changeset 1406305)

Jan 28 2015
23:54

by [dotnet bot](#) in revision [94858618d0232a01538182a44454986b2a3dff78](#) (master)

Files: 544 added

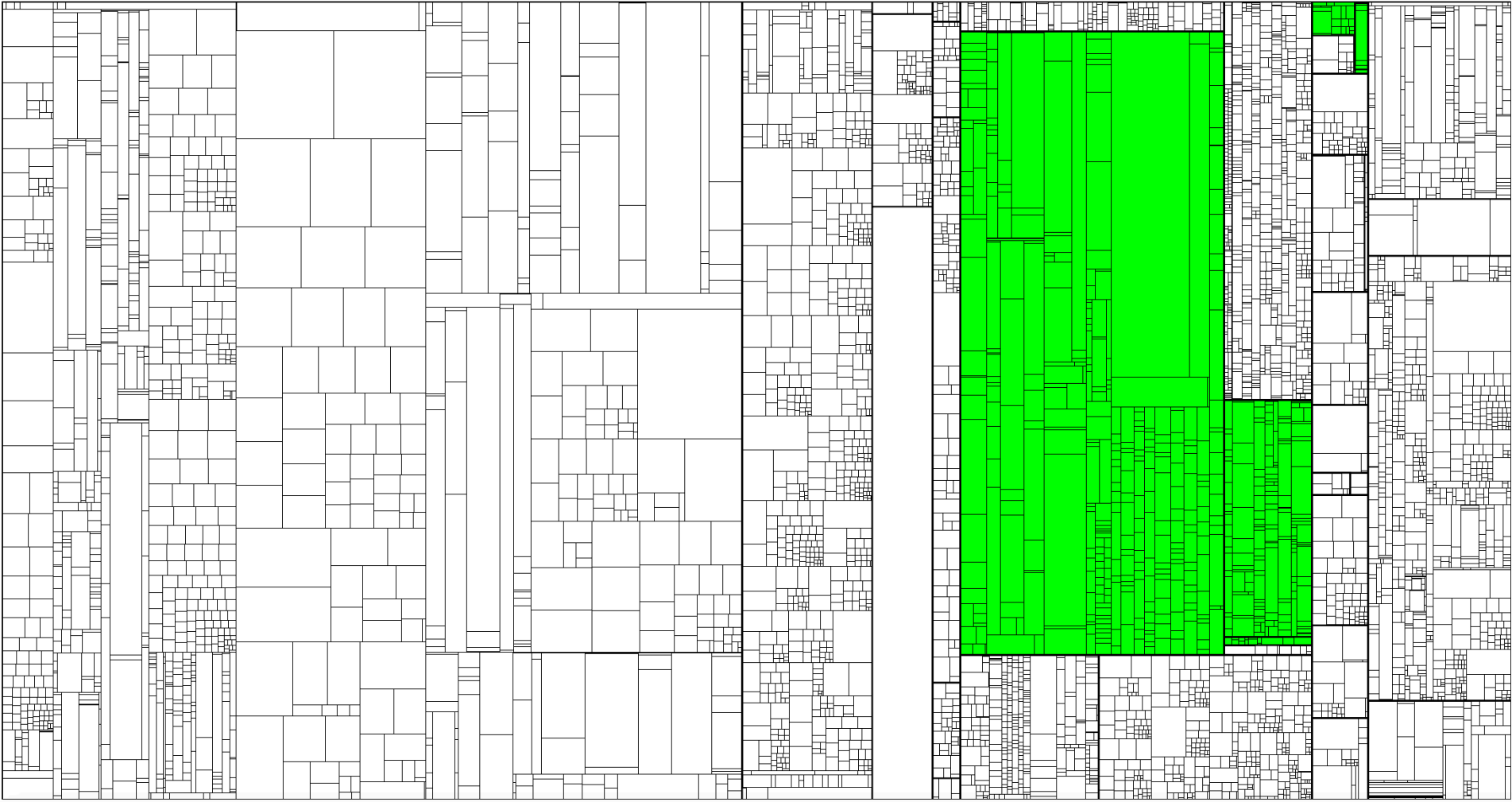
Findings: 2081

Legend:

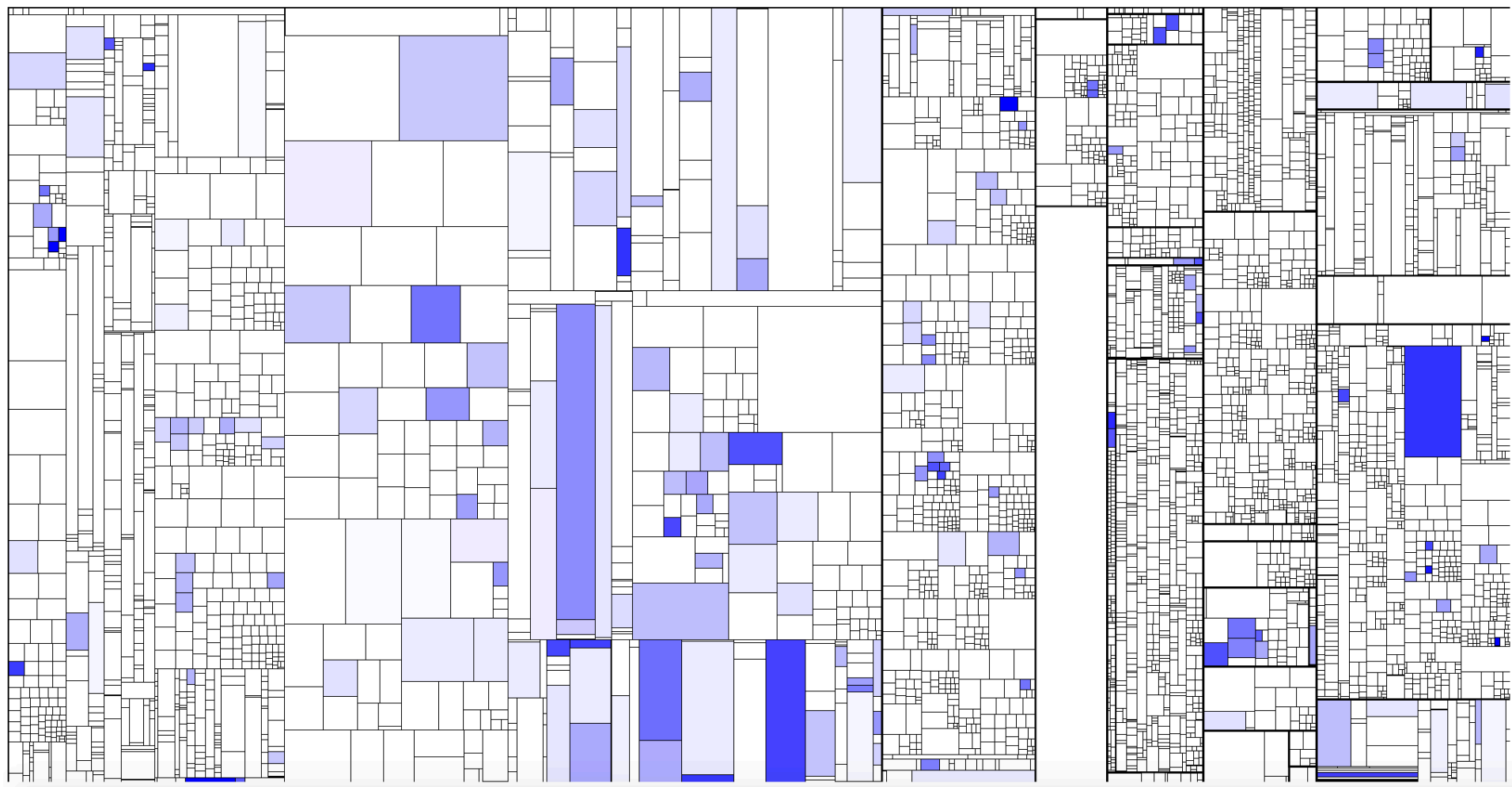
- Lines of Code
- Clone Coverage

1,200,000

2.0%



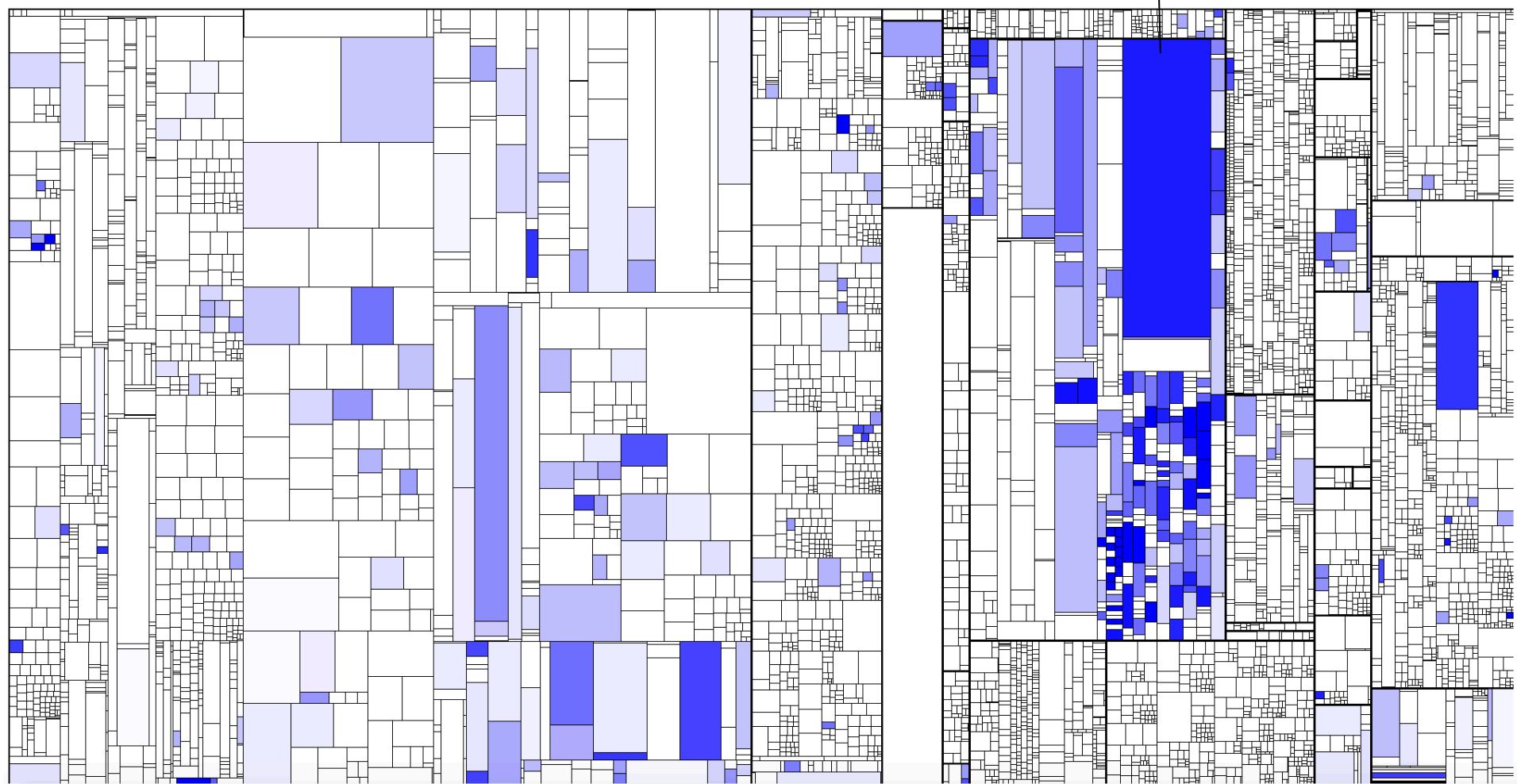
Änderungen



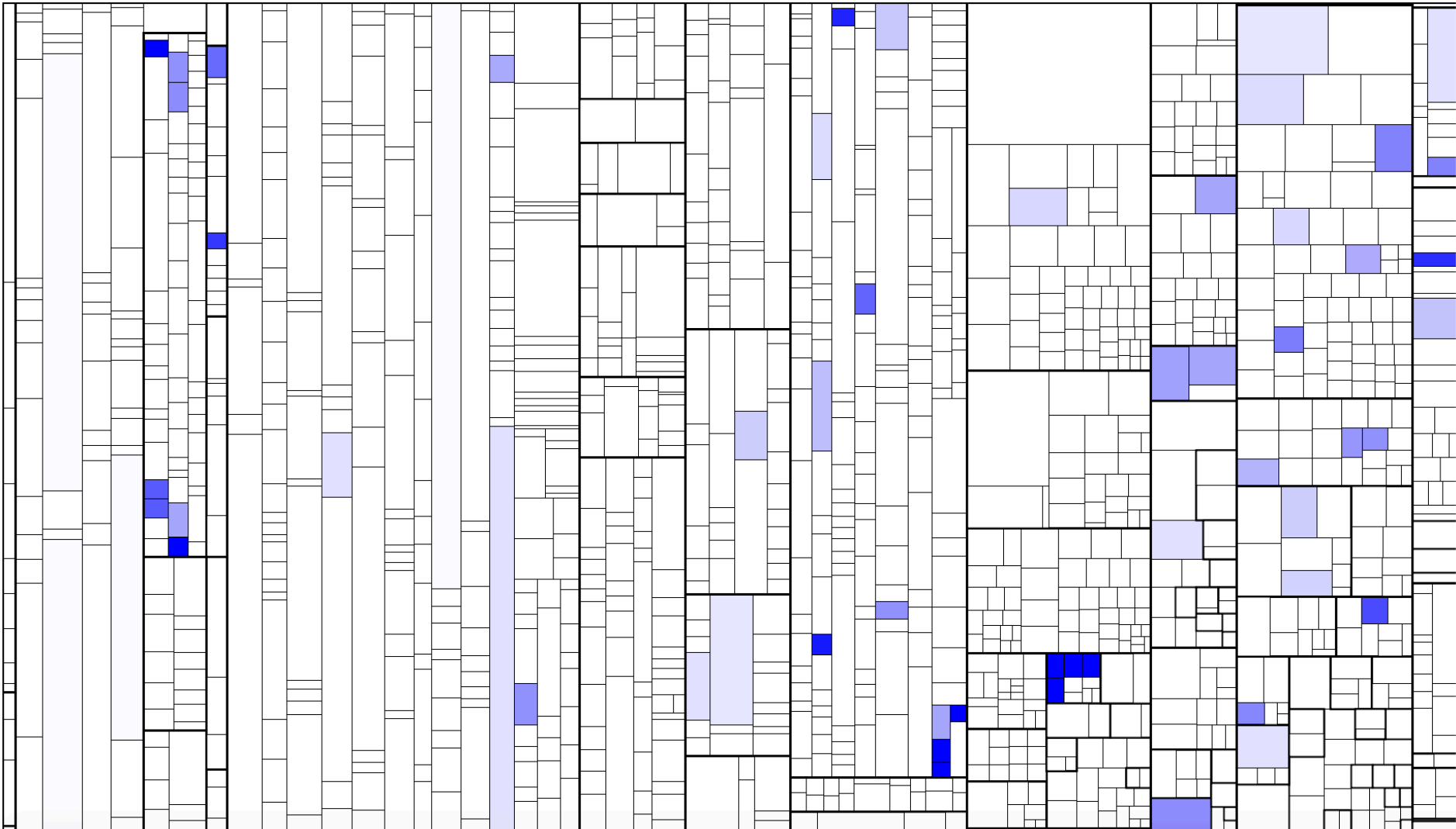
Vorher
(Klonüberdeckung 5,2%)

Performance-Test Case (89% Klonüberdeckung)

Clone Coverage Treemap for roslyn-c-



Nachher
(Klonüberdeckung 9,6%)




Head (Feb. 2016)
Klonüberdeckung: 2,2%



LOC vs. Clone Coverage Trend for jenkins

220,000

5.0%



Merge pull request #294 from stephenc/master Nice improvement to Jenkins testability
by Nicolas De loof in revision c24a2b1ec93064eb2e085ba6d07ca4c85b2c7675 (master)
Files: 5 added
Findings: 34

Oct 19 2011
18:07

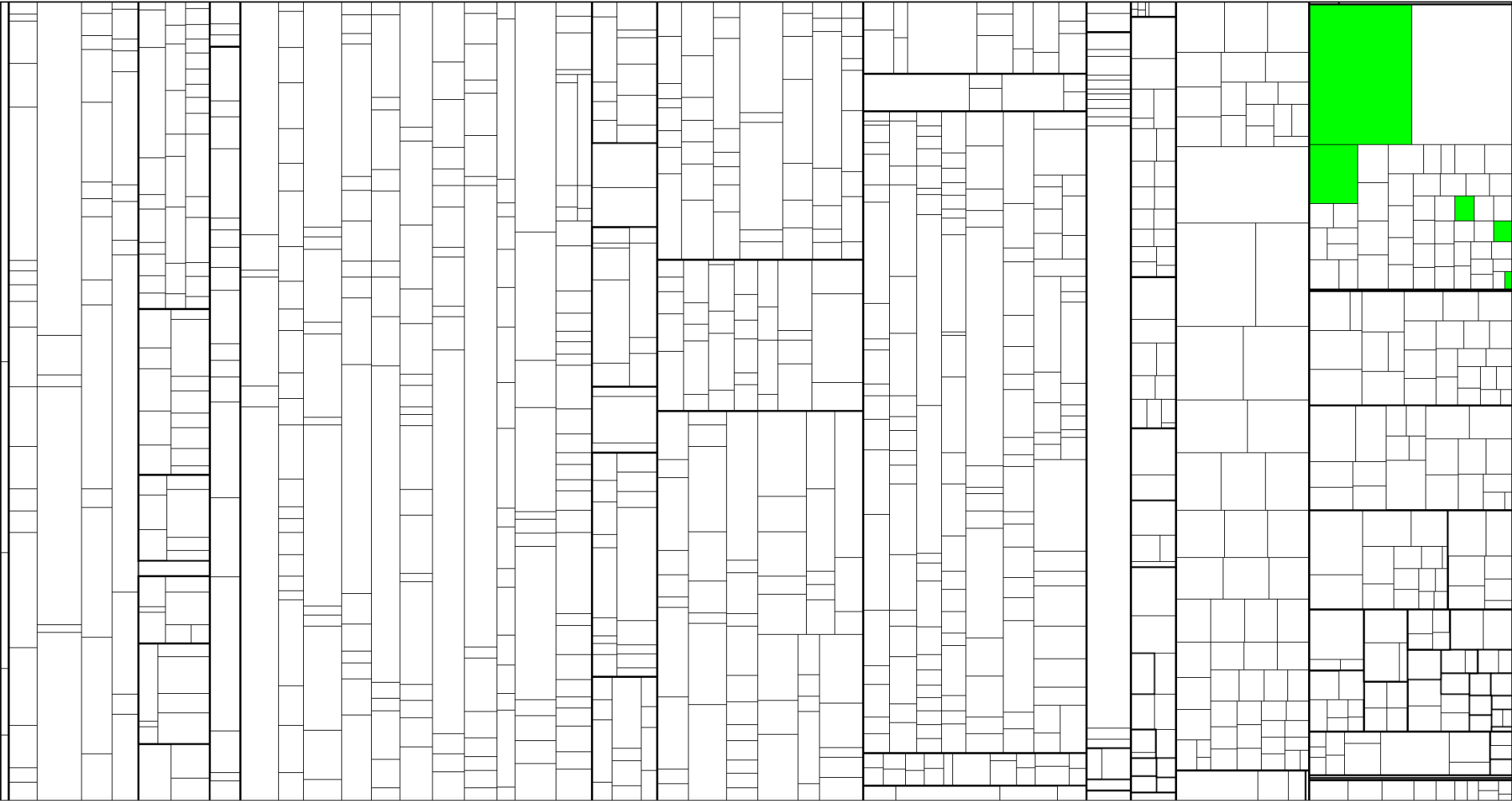


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Jan 2007 Jul 2007 Jan 2008 Jul 2008 Jan 2009 Jul 2009 Jan 2010 Jul 2010 Jan 2011 Jul 2011 Jan 2012 Jul 2012 Jan 2013 Jul 2013 Jan 2014 Jul 2014 Jan 2015 Jul 2015 Jan 2016

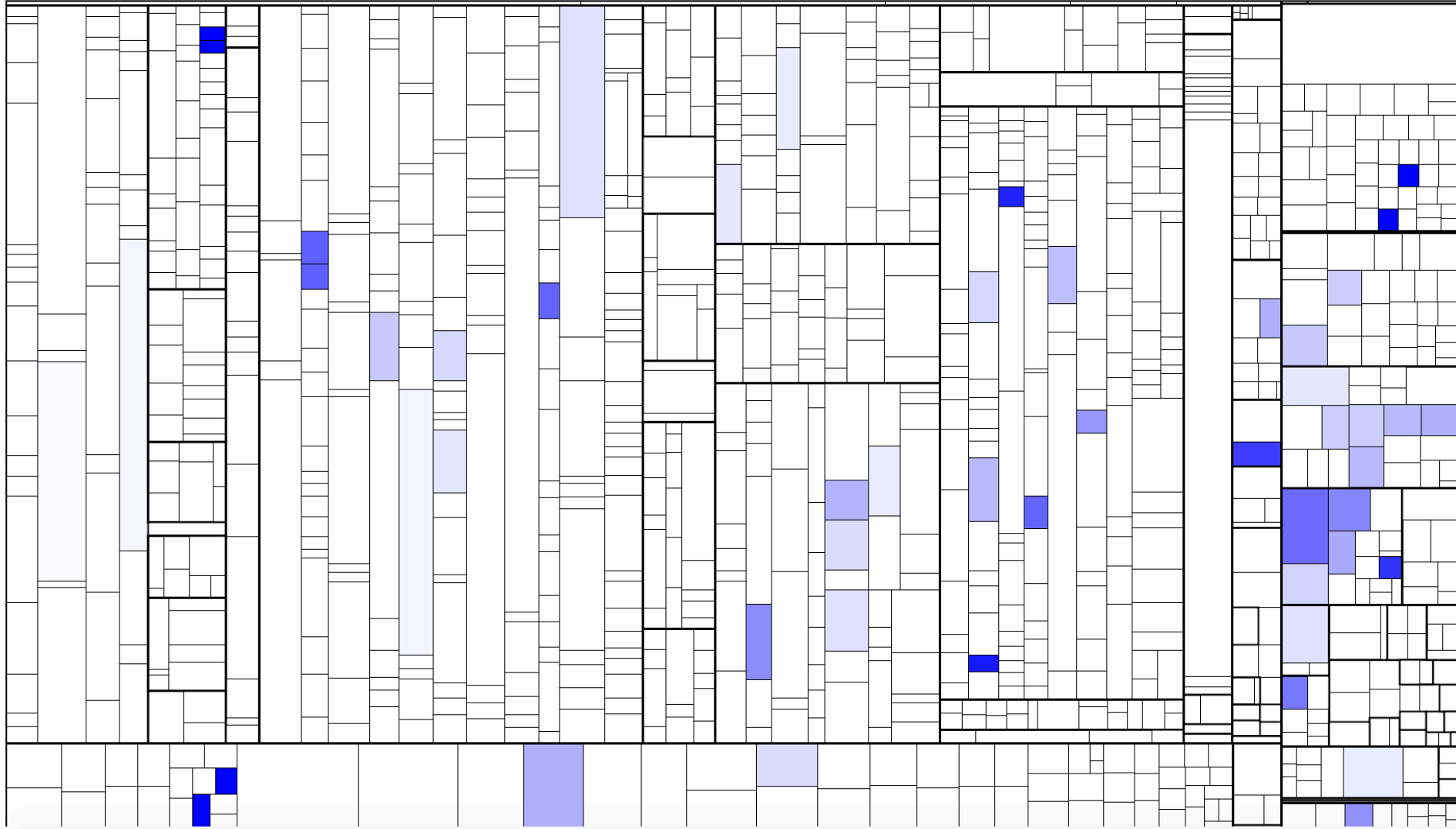
1.0%





red: deleted, blue: edited, green: added

Änderungen

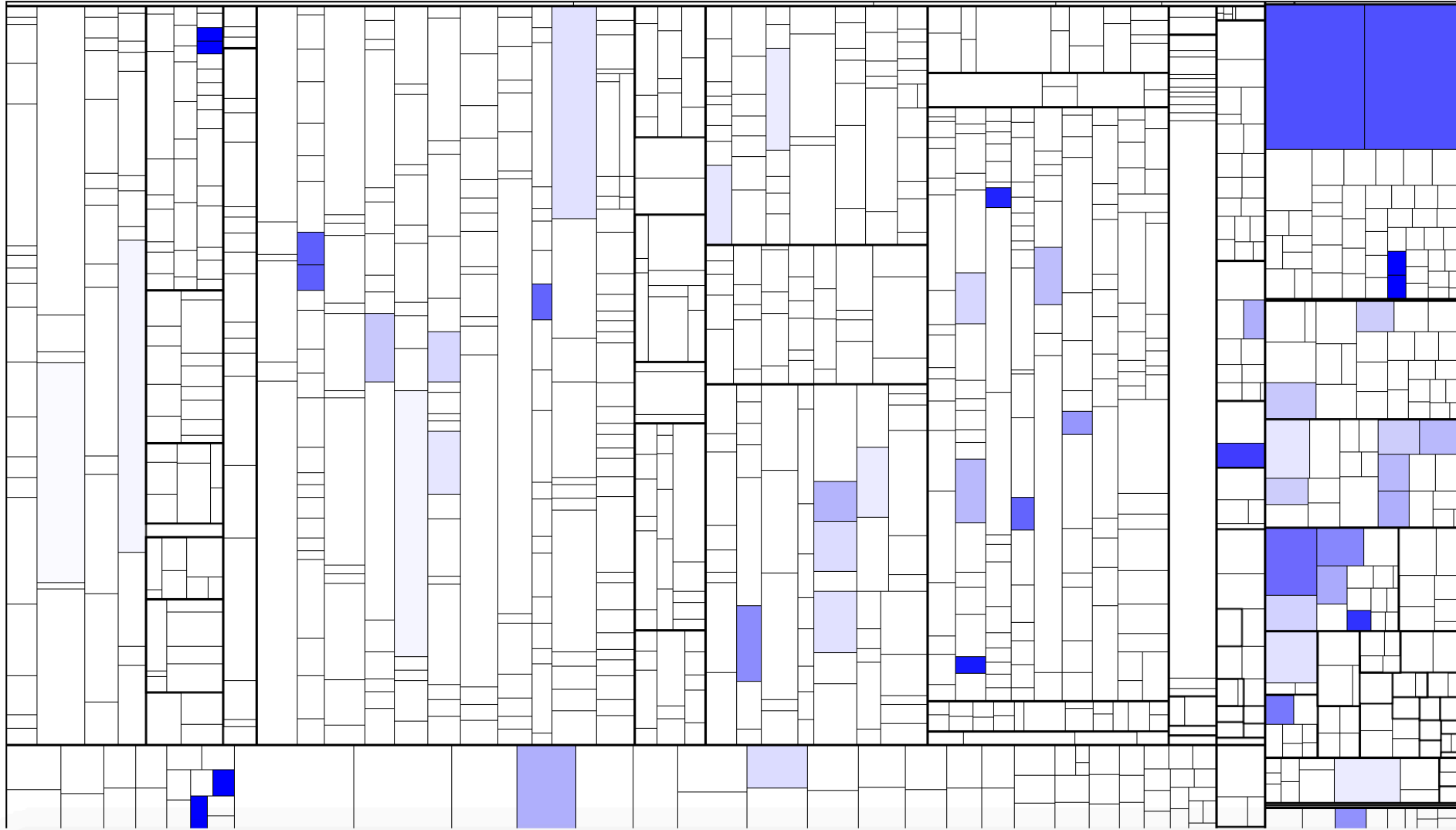


Vorher
(Klonüberdeckung 2,3%)

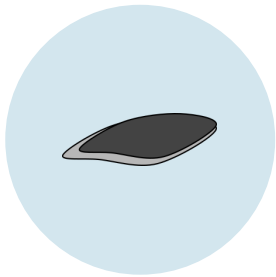


JenkinsRule.java / HudsonTestCase.java (68% Klonüberdeckung)

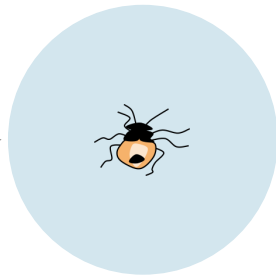
Clone Coverage Treemap for jenkins



Nachher
(Klonüberdeckung 4,2%)



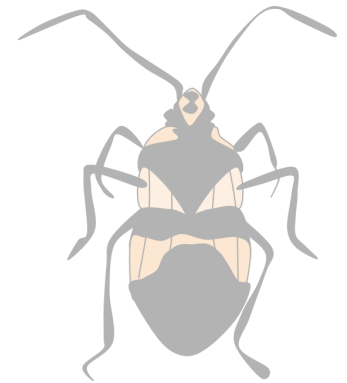
Team-Wechsel



Code-Ownership



Inkonsistenter Klon



Bug

Historien-Analyse

Agenda

1

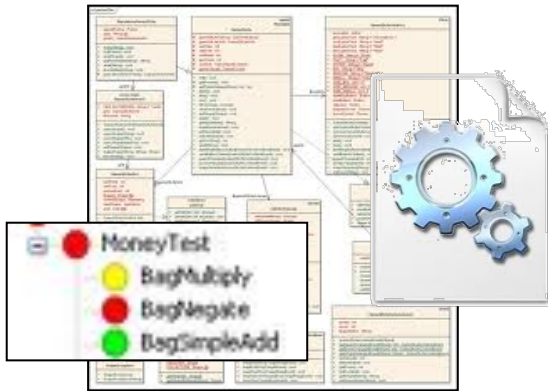
Welche Probleme verrät die Historie?

2

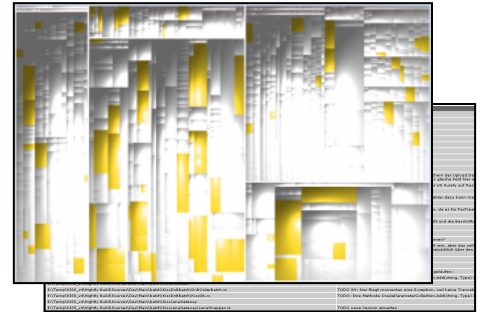
Was kann man im eigenen Projekt machen?

Historienanalysen erfordern neue Werkzeuge.

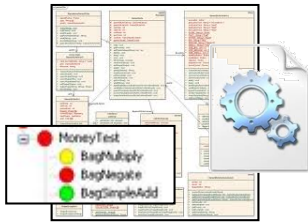




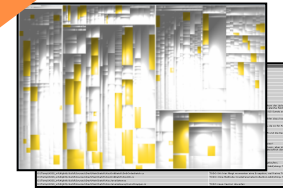
conQAT



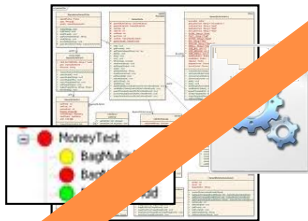
Baseline



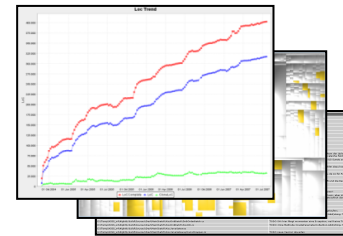
Baseline
Dashboard



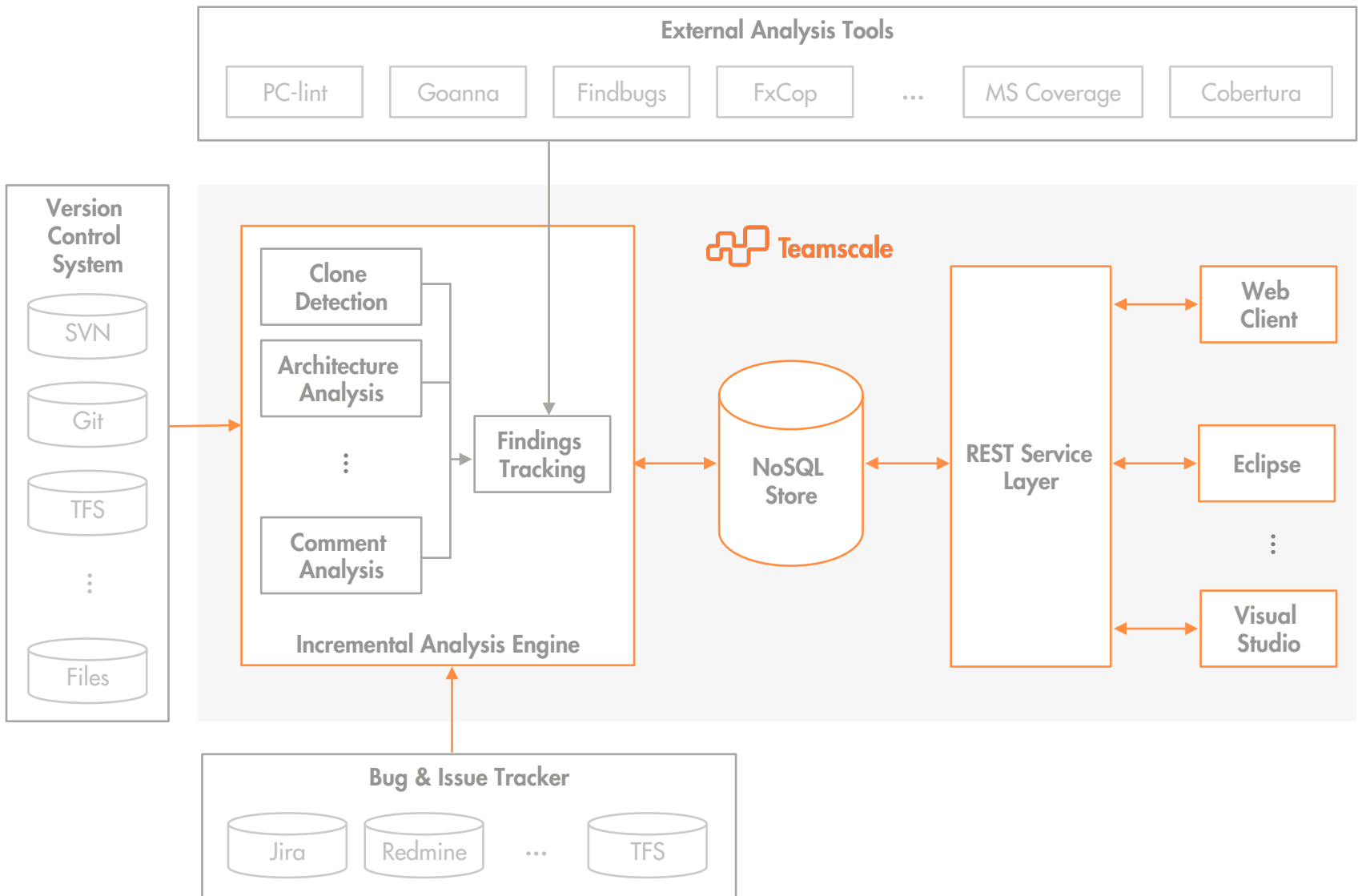
Latest Version



Dashboard
inkl Delta



conDA



Project:

Branch:

Timetravel: All Commits.



Merge remote-tracking branch 'origin/cr/9905'

Oct 20 2016

by [Lars Heinemann](#) in revision [3e9579a715a156d2e629fcb02a44f3c1d3ad0b5b](#) in branch master

14:34

(repository1)
Merged from [cr/9905](#)

Files: 3 changed

Findings: 0



Merge branch 'master' into cr/10552_branch_coverage

Oct 20 2016

by [Benjamin Hummel](#) in revision [25692692f99563e104e167204f860ceec5fa92aa](#) in branch

14:24

[cr/10552_branch_coverage](#) (repository1)

Merged from [master](#)

Files: 13 added, 152 changed, 3 deleted

Findings: 59 8 69



CR#9766: reviewed

Oct 20 2016

by [Lars Heinemann](#) in revision [ed133b7b146e1d5051c19995a0be058f48a0c0b9](#) in branch master

14:22

(repository1)

Files: 2 changed

Findings: 8



CR#10552 GREEN (with Thomas)

Oct 20 2016

by [Benjamin Hummel](#) in revision [31b76706e1d6a7600762d5881f5850ef8da06bad](#) in branch

14:19

[cr/10552_branch_coverage](#) (repository1)

Files: 7 changed

Findings: 11



CR#0: trying to fix test

Oct 20 2016

by [Lars Heinemann](#) in revision [87d74fd92ba06f9b3f43be63a641008bdf8ed0a1](#) in branch master

13:24

(repository1)

Files: 1 changed

Findings: 0



BusinessRuleTaskXMLConverter.java DefinitionsParser.java

```

model.setTargetNamespace(xtr.getAttributeValue(null, TARGET_NAMESPACE_ATTRIBUTE));
for (int i = 0; i < xtr.getNamespaceCount(); i++) {
    String prefix = xtr.getNamespacePrefix(i);
    if (StringUtils.isNotEmpty(prefix)) {
        model.addNamespace(prefix, xtr.getNamespaceURI(i));
    }
}

for (int i = 0; i < xtr.getAttributeCount(); i++) {
    ExtensionAttribute extensionAttribute = new ExtensionAttribute();
    extensionAttribute.setName(xtr.getAttributeLocalName(i));
    extensionAttribute.setValue(xtr.getAttributeValue(i));
    if (StringUtils.isNotEmpty(xtr.getAttributeNamespace(i))) {
        extensionAttribute.setNamespace(xtr.getAttributeNamespace(i));
    }
    if (StringUtils.isNotEmpty(xtr.getAttributePrefix(i))) {
        extensionAttribute.setNamespacePrefix(xtr.getAttributePrefix(i));
    }
    if (!BpmnXMLUtil.isBlacklisted(extensionAttribute, defaultAttributes)) {
        model.addDefinitionsAttribute(extensionAttribute);
    }
}

```

Clone with 2 instances of length 10

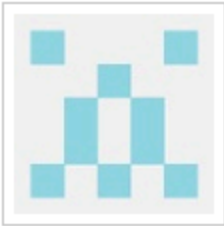
Problems @ Javadoc Declaration Findings Orphans View Properties

4 items

Description	Group	Category	Resource	Location
Clone with 2 instances of length 10	Code Duplica...	Cloning	DefinitionsPa...	47-60
Interface comment missing	Documentati...	Comment co...	DefinitionsPa...	29
Interface comment missing	Documentati...	Comment co...	DefinitionsPa...	38
Name violates naming convention: defaultAttributes. Should be	Naming	Java naming ...	DefinitionsPa...	31

Mit geerbten Problemen pragmatisch umgehen





Implement a cleaner fix for the gap issues when drawing ellipses.

by [Cameron White](#) in revision [10662429ab96515bb2855cde252b04e1fd65212a](#) (master)

Feb 23 2015

01:06

▼ Affected files (4)

▼ Metric changes

1 alerts:

Message

Context

Found potential inconsistent clone change in EllipseEngine.cs

[\[Broken clone\]](#) [\[Old clone finding\]](#) [\[Code change\]](#)



```

265     }
266
267     /// <summary>
268     /// Calculate each intermediate Point in the specified curve, returning Math.Round(1d / tInterval - 1d)
269     /// </summary>
270     /// <param name="tInterval">The increment value for t (should be between 0-1).</param>
271     /// <param name="x0">Starting point X (not included in the returned Point(s)).</param>
272     /// <param name="y0">Starting point Y (not included in the returned Point(s)).</param>
273     /// <param name="x1">Control point 1 X.</param>
274     /// <param name="y1">Control point 1 Y.</param>
275     /// <param name="x2">Control point 2 X.</param>
276     /// <param name="y2">Control point 2 Y.</param>
277     /// <param name="x3">Ending point X (included in the returned Point(s)).</param>
278     /// <param name="y3">Ending point Y (included in the returned Point(s)).</param>
279     /// <returns></returns>
280     List<IntPoint> CalculateCurvePoints(double tInterval, double x0, double y0, double x1, double y1, double
281     {
282         //Create a new partial Polygon to store the calculated Points.
283         List<IntPoint> calculatedPoints = new List<IntPoint>((int)(1d / tInterval));
284
285         double oneMinusT;
286         double oneMinusTSquared;
287         double oneMinusTCubed;
288
289         double tSquared;
290         double tCubed;
291
292         double oneMinusTSquaredTimesTTimesThree;
293         double oneMinusTTimesTSquaredTimesThree;
294
295         //t will go from tInterval to 1d at the interval of tInterval. t starts
296         //at tInterval instead of 0d because the first Point in the curve is
297         //skipped. This is needed because multiple curves will be placed
298         //sequentially after each other and we don't want to have the same
299         //Point be added to the Polygon twice.
300         for (double t = tInterval; t < 1d; t += tInterval)
301         {
302             //There are 3 "layers" in a cubic Bezier curve's calculation. These "layers"
303             //must be calculated for each intermediate Point (for each value of t from
304             //tInterval to 1d). The Points in each "layer" store [the distance between
305             //two consecutive Points from the previous "layer" multiplied by the value
306             //of t (which is between 0d-1d)] plus [the position of the first Point of
307             //the two consecutive Points from the previous "layer"]. This must be
308             //calculated for the X and Y of every consecutive Point in every layer
309             //until the last Point possible is reached, which is the Point on the curve.
310
311             //Note: the code below is an optimized version of the commented explanation above.
312
313             oneMinusT = 1d - t;
314             oneMinusTSquared = oneMinusT * oneMinusT;
315             oneMinusTCubed = oneMinusTSquared * oneMinusT;
316
317             tSquared = t * t;
318             tCubed = tSquared * t;
319
320             oneMinusTSquaredTimesTTimesThree = oneMinusTSquared * t * 3d;
321             oneMinusTTimesTSquaredTimesThree = oneMinusT * tSquared * 3d;
322
323             calculatedPoints.Add(new IntPoint(
324                 (long)(oneMinusTCubed * x0 + oneMinusTSquaredTimesTTimesThree * x1 + oneMinusTTimesTSquaredTimes

```

```

249     /// <summary>
250     /// Calculate each intermediate Point in the specified curve, returning Math.Round(1d / tInterval - 1d)
251     /// </summary>
252     /// <param name="tInterval">The increment value for t (should be between 0-1).</param>
253     /// <param name="x0">Starting point X (not included in the returned Point(s)).</param>
254     /// <param name="y0">Starting point Y (not included in the returned Point(s)).</param>
255     /// <param name="x1">Control point 1 X.</param>
256     /// <param name="y1">Control point 1 Y.</param>
257     /// <param name="x2">Control point 2 X.</param>
258     /// <param name="y2">Control point 2 Y.</param>
259     /// <param name="x3">Ending point X (included in the returned Point(s)).</param>
260     /// <param name="y3">Ending point Y (included in the returned Point(s)).</param>
261     /// <param name="cPIndex">The index of the previous ControlPoint to the generated points.</param>
262     /// <returns></returns>
263     protected List<GeneratedPoint> calculateCurvePoints(
264         double tInterval,
265         double x0, double y0, double x1, double y1, double x2, double y2, double x3, double y3,
266         int cPIndex)
267     {
268         List<GeneratedPoint> calculatedPoints = new List<GeneratedPoint>((int)(1d / tInterval));
269
270         double oneMinusT;
271         double oneMinusTSquared;
272         double oneMinusTCubed;
273
274         double tSquared;
275         double tCubed;
276
277         double oneMinusTSquaredTimesTTimesThree;
278         double oneMinusTTimesTSquaredTimesThree;
279
280         for (double t = 0; t < 1d; t += tInterval)
281         {
282             //There are 3 "layers" in a cubic Bezier curve's calculation. These "layers"
283             //must be calculated for each intermediate Point (for each value of t from
284             //tInterval to 1d). The Points in each "layer" store [the distance between
285             //two consecutive Points from the previous "layer" multiplied by the value
286             //of t (which is between 0d-1d)] plus [the position of the first Point of
287             //the two consecutive Points from the previous "layer"]. This must be
288             //calculated for the X and Y of every consecutive Point in every layer
289             //until the last Point possible is reached, which is the Point on the curve.
290
291             //Note: the code below is an optimized version of the commented explanation above.
292
293             oneMinusT = 1d - t;
294             oneMinusTSquared = oneMinusT * oneMinusT;
295             oneMinusTCubed = oneMinusTSquared * oneMinusT;
296
297             tSquared = t * t;
298             tCubed = tSquared * t;
299
300             oneMinusTSquaredTimesTTimesThree = oneMinusTSquared * t * 3d;
301             oneMinusTTimesTSquaredTimesThree = oneMinusT * tSquared * 3d;
302
303             calculatedPoints.Add(new GeneratedPoint(new PointD(
304                 (oneMinusTCubed * x0 + oneMinusTSquaredTimesTTimesThree * x1 + oneMinusTTimesTSquaredTimesTh
305                 (oneMinusTCubed * y0 + oneMinusTSquaredTimesTTimesThree * y1 + oneMinusTTimesTSquaredTimesTh
306                 cPIndex));
307         }

```

Wartungsprobleme schrittweise aufräumen



Project: Activiti Branch: master Timetravel: Findings at most recent revision

17712 findings in activiti (3 blacklisted)

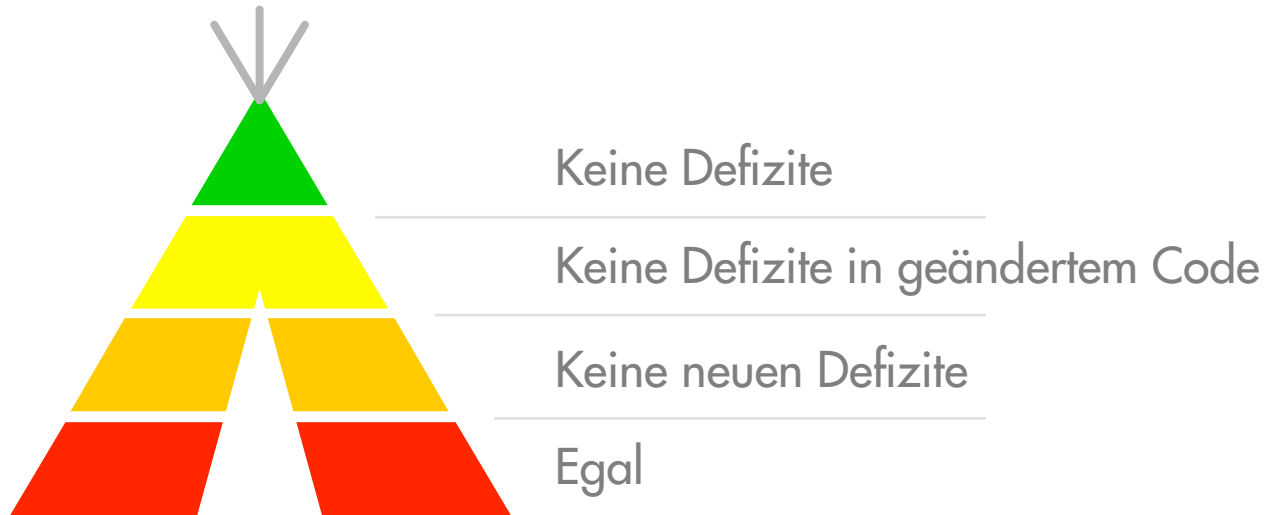
[Add findings to task](#)

Message	Location	Finding Group	Introduction date
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:256	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:187	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:175	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:74	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:86	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:162	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:146	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:150	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:98	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:272	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:223	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:78	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:219	Documentation / Comment completeness	Jan 26 2016 20:34
Clone with 2 instances of length 12	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:146-169	Code Duplication / Cloning	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:171	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:90	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:264	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:211	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:231	Documentation / Comment completeness	Jan 26 2016 20:34
Clone with 2 instances of length 12	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:171-193	Code Duplication / Cloning	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:121	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:82	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:260	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:215	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:183	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:154	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:252	Documentation / Comment completeness	Jan 26 2016 20:34





Qualitätsziele



Project: Activiti Branch: master Timetravel: Findings at most recent revision

17712 findings in activiti (3 blacklisted)

[Add findings to task](#)

Message	Location	Finding Group	Introduction date
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:256	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:187	Documentation / Comment completeness	Jan 26 2016 20:34
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Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:74	Documentation / Comment completeness	Jan 26 2016 20:34
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Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:223	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:78	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:219	Documentation / Comment completeness	Jan 26 2016 20:34
Clone with 2 instances of length 12	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:146-169	Code Duplication / Cloning	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:171	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:90	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:264	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:211	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:231	Documentation / Comment completeness	Jan 26 2016 20:34
Clone with 2 instances of length 12	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:171-193	Code Duplication / Cloning	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:121	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:82	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:260	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:215	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:183	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:154	Documentation / Comment completeness	Jan 26 2016 20:34
Interface comment missing	modules/activiti-engine/.../impl/RepositoryServiceImpl.java:252	Documentation / Comment completeness	Jan 26 2016 20:34

Project: Activiti Branch: Timetravel: Findings at most recent revision

11 findings in [activiti](#) since Baseline Release 2.2 (0 blacklisted)

[Add findings to task](#)

Message	Location	Finding Group	Introduction date
Interface comment missing	modules/activiti-engine/.../impl/TaskQueryImpl.java:455	Documentation / Comment completeness	Feb 01 2017 16:01
Violation of nesting depth threshold of 3.0: 4.0	modules/activiti-engine/.../task/TaskQueryTest.java:705	Structure / Nesting Depth	Feb 02 2017 16:39
Interface comment missing	modules/activiti-engine/.../task/TaskQueryTest.java:685	Documentation / Comment completeness	Feb 02 2017 16:39
Interface comment missing	modules/activiti-engine/.../entity/AttachmentEntityManager.java:44	Documentation / Comment completeness	Jan 04 2017 14:43
Violation of method length threshold (source lines of...	modules/activiti-engine/.../entity/HistoricProcessInstanceEntityManager.java:54-96	Structure / Method Length	Jan 04 2017 14:43
Interface comment missing	modules/activiti-engine/.../event/AttachmentEventsTest.java:193	Documentation / Comment completeness	Jan 04 2017 14:43
Method throws generic exception of type 'Exception'	modules/activiti-engine/.../event/AttachmentEventsTest.java:250-273	Code Anomalies / Bad practice	Jan 04 2017 14:43
Method throws generic exception of type 'Exception'	modules/activiti-engine/.../event/AttachmentEventsTest.java:193-213	Code Anomalies / Bad practice	Jan 04 2017 14:43
Interface comment missing	modules/activiti-engine/.../event/AttachmentEventsTest.java:250	Documentation / Comment completeness	Jan 04 2017 14:43
Clone with 2 instances of length 11	modules/activiti-engine/.../event/AttachmentEventsTest.java:199-211	Code Duplication / Cloning	Jan 04 2017 14:43
Clone with 2 instances of length 11	modules/activiti-engine/.../event/AttachmentEventsTest.java:259-271	Code Duplication / Cloning	Jan 04 2017 14:43

Project: Activiti Branch: master Timetravel: All Commits



Fixes <https://github.com/Activiti/Activiti/issues/1019> : taskCandidate cause Referential integrity constraint violation for task with skipExpression
by [Isabella Wright](#) in revision [15ab72410f151970ef264b0275232b19d6739a2e](#) in branch master (GitHub) Sep 13 2016 17:29

Files: 2 changed
Findings: 0 1 5



Small tweaks to <https://github.com/Activiti/Activiti/pull/979> : - add 'database' prefix to be consistent with other properties - Created abstract superclas 'AbstractEscapeClauseTestCase', which uses a specific activiti.cfg.xml file, instead of having the default one have the escapeClause setting (only these test should test it)
by [Isabella Wright](#) in revision [d1beda2e181fd1e77499674f320bafaadb73288c](#) in branch master (GitHub) Sep 09 2016 16:39

Files: 14 added, 2 changed, 13 deleted
Findings: 0 8 2 1



- 8 **neue** Defizite
- 2 Defizite in **geändertem** Code
- 1 Defizit **aufgeräumt**

Sinn und Wirksamkeit von Änderungen überprüfen





```
58 | public void testFetchTaskWithSpecificVariable() {
59 |
60 |     // Create test data
61 |     for (int i=0; i<5; i++) {
62 |         Task task = taskService.newTask();
63 |         task.setName(i + "");
64 |         taskService.saveTask(task);
65 |
66 |         taskService.setVariable(task.getId(), "myVar", Long.valueOf(task.getId()) * 2);
67 |         taskService.setVariable(task.getId(), "myVar2", "SomeOtherValue");
68 |     }
69 |
70 |     // Fetch data with custom query
71 |     CustomSqlExecution<MyTestMapper, List<Map<String, Object>>> customSqlExecution =
72 |         new AbstractCustomSqlExecution<MyTestMapper, List<Map<String, Object>>>(MyTestMapper.class) {
73 |
74 |         public List<Map<String, Object>> execute(MyTestMapper customMapper) {
75 |             return customMapper.selectTaskWithSpecificVariable("myVar");
76 |         }
77 |     };
78 |
79 |     // Verify
80 |     List<Map<String, Object>> results = managementService.executeCustomSql(customSqlExecution);
81 |     assertEquals(5, results.size());
82 |     for (int i=0; i<5; i++) {
83 |         Map<String, Object> result = results.get(i);
84 |         Long id = Long.valueOf((String) getResultObject("TASKID", result));
85 |         Long variableValue = null;
86 |         Object variableObjectValue = getResultObject("VARIABLEVALUE", result);
87 |         if (variableObjectValue instanceof BigDecimal) { // in oracle it's BigDecimal
88 |             variableValue = ((BigDecimal)variableObjectValue).longValue();
89 |         } else {
90 |             variableValue = (Long) variableObjectValue;
91 |         }
92 |     }
93 |     assertEquals(id * 2, variableValue.longValue());
94 | }
95 |
96 | // Cleanup
97 | for (Task task : taskService.createTaskQuery().list()) {
98 |     taskService.deleteTask(task.getId());
99 |     historyService.deleteHistoricTaskInstance(task.getId());
100 | }
101 |
102 | }
103 |
104 | protected Object getResultObject(String key, Map<String, Object> result) {
```

```
57 | public void testFetchTaskWithSpecificVariable() {
58 |
59 |     // Create test data
60 |     for (int i=0; i<5; i++) {
61 |         Task task = taskService.newTask();
62 |         task.setName(i + "");
63 |         taskService.saveTask(task);
64 |
65 |         taskService.setVariable(task.getId(), "myVar", Long.valueOf(task.getId()) * 2);
66 |         taskService.setVariable(task.getId(), "myVar2", "SomeOtherValue");
67 |     }
68 |
69 |     // Fetch data with custom query
70 |     CustomSqlExecution<MyTestMapper, List<Map<String, Object>>> customSqlExecution =
71 |         new AbstractCustomSqlExecution<MyTestMapper, List<Map<String, Object>>>(MyTestMapper.class) {
72 |
73 |         public List<Map<String, Object>> execute(MyTestMapper customMapper) {
74 |             return customMapper.selectTaskWithSpecificVariable("myVar");
75 |         }
76 |     };
77 |
78 |     // Verify
79 |     List<Map<String, Object>> results = managementService.executeCustomSql(customSqlExecution);
80 |     assertEquals(5, results.size());
81 |     for (int i=0; i<5; i++) {
82 |         Map<String, Object> result = results.get(i);
83 |         Long id = Long.valueOf((String) getResultObject("TASKID", result));
84 |         Long variableValue = ((Number) getResultObject("VARIABLEVALUE", result)).longValue();
85 |         assertEquals(id * 2, variableValue.longValue());
86 |     }
87 |
88 |     // Cleanup
89 |     for (Task task : taskService.createTaskQuery().list()) {
90 |         taskService.deleteTask(task.getId());
91 |         historyService.deleteHistoricTaskInstance(task.getId());
92 |     }
93 | }
94 |
95 | }
96 |
97 | protected Object getResultObject(String key, Map<String, Object> result) {
98 |     Object resultObject = result.get(key);
99 |     if (resultObject == null) { // postgresql requires lower case
100 |         resultObject = result.get(key.toLowerCase());
101 |     }
102 |     return resultObject;
103 | }
```

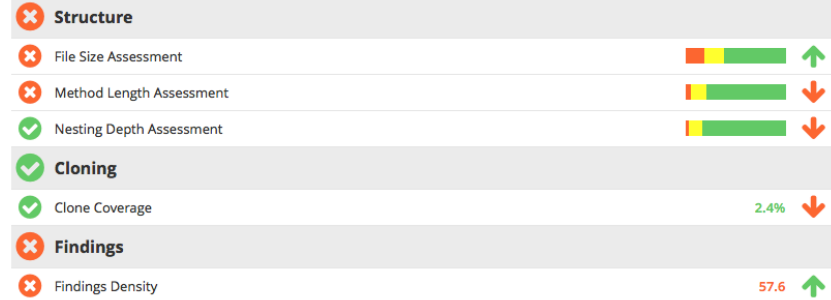
Clone Coverage for jenkins

2.4%
+0.24%

Lines of Code for jenkins

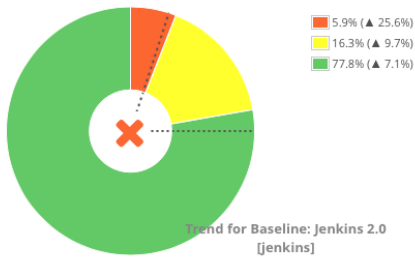
190.3k
+13.5k

Overall Rating for jenkins

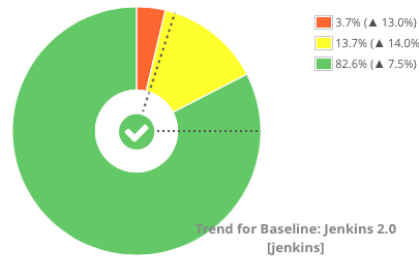


Trend for Baseline: Jenkins 2.0 [jenkins]

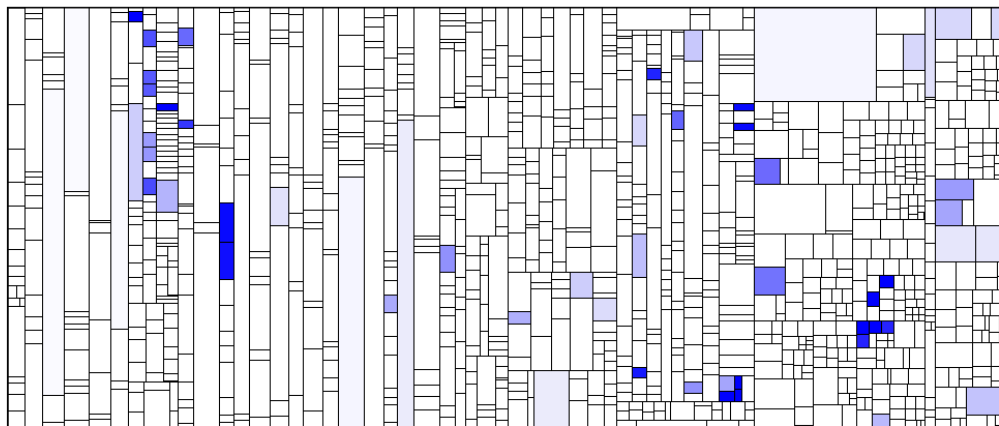
Method Length for jenkins



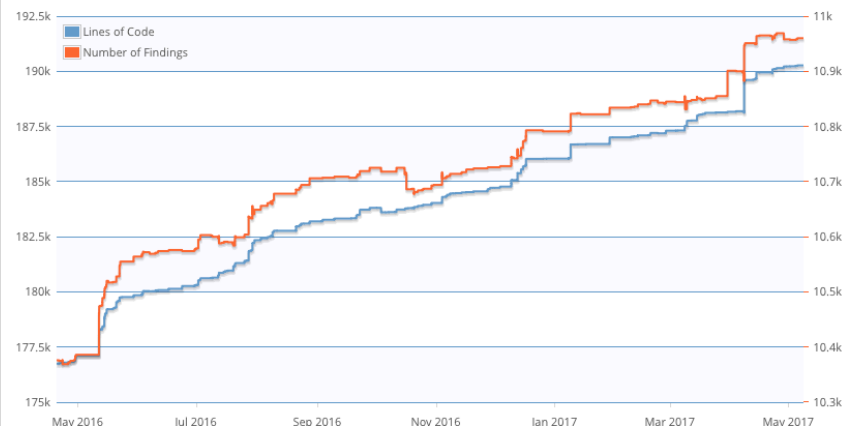
Nesting Depth for jenkins



Clone Coverage Treemap for jenkins



System Size and Findings Trend for jenkins



Fazit

Historienanalysen schaffen ein umfassenderes **Verständnis** als Analysen auf dem aktuellen Stand.

Dadurch erlauben sie die Erkennung und Behebung von **Ursachen**, nicht nur Symptomen.



Kontakt

Ich freue mich auf Diskussionen!

Für eine Evaluierungslizenz von Teamscale (www.teamscale.com),
melden Sie sich bitte bei mir.

Wenn Sie Interesse an einem Job in diesem Bereich haben, bitte auch melden 😊

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