

CWI

vadim@grammarware.net



# Open Notebook Computer Science



Open Software Day 2012

Vadim Zaytsev, SWAT, CWI



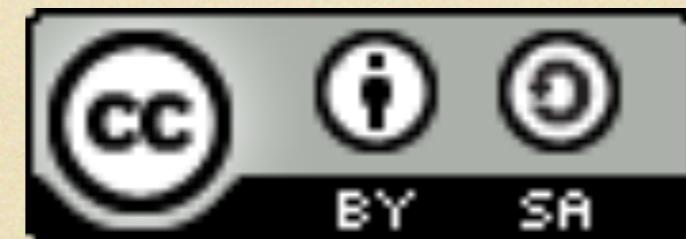
Open Science

# Open ...

A piece of content or data is *open* if anyone is free to use, reuse, and redistribute it — subject only, at most, to the requirement to attribute and/or share-alike.

OPEN KNOWLEDGE

OPEN CONTENT



OPEN DATA

OPEN SERVICE

# Open source software

- Source code is available
  - to copy and distribute
  - to inspect and analyse
  - to modify and specialise
  - to repurpose and extend
- “Open source science”
  - term occasionally used in open access discussions
  - not enough for science!



# (Computer) Science

- Accumulating knowledge
- Experiments and hypotheses
- Long line of failures
- Published success stories
- Formal methods
- Assumed/expected rigidity





# Open access

- “Green” route

- embargo period
- restricted reuse

still not enough!

- “Gold” route
  - pre-publication charges up front
  - immediate free unlimited access

self-archiving

- “Silver” route
  - disclose papers after submission
  - parallel/ to traditional publishing

# Open research

- Open access + open collaboration
- Transparency + reproducibility
- Scientists want credit
  - credit ⇒ priority ⇒ prestige
  - no need to code in anagrams any more
  - enough to be the first on the web

# Open notebook



- Lab notebook: public, free, indexed by search engines
- Expose even raw experimental data
  - to reinterpret and reanalyse
  - to repurpose and reuse
- Variations
  - some content / all content
  - immediate access / delayed access

# Open notebook in CS/SE



- Not enough? Too much!
- Pros
  - nice to use
  - achieves lots of objectives of open science
- Contras
  - tough to create
  - jeopardises the research itself

**Open Notebook**

# Automation: traces

- Git/subversion/... commits
- Tweets
- Quora answers
- Papers!
- Presentations
- Blog posts
- Wiki edits
- Exposed tools
- Documentation
- Shared raw data
- Auxiliary material
- ...

## The notational conventions I adopted, and why

At a given moment, the concept of polite mathematics emerged, the underlying idea of which is that, even if you have only 60 readers, it pays to spend an hour if by doing so you can save your average reader a minute. By inventing an idealized "average reader", we could translate most of the lofty, human goal of politeness into more or less formal criteria we could apply to our texts. This note is devoted to the resulting notational and stylistic conventions that were adopted as the years went by.

CW

grammarware (Vadim Zaytsev) <https://github.com/grammarware>

**github** Search or Type a Command Explore Gist Blog Help **grammarware**

This is you! [Edit Your Profile](#)

**grammarware (Vadim Zaytsev)**

---

Email [vadim@grammarware.net](mailto:vadim@grammarware.net)  
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Organizations 

---

### Repositories (3)

New repository [Find a repository...](#)

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**ruconf** Python ★ 1 ⚡ 0  
 Международные научные конференции  
 Last updated a month ago  


**slops** Java ★ 2 ⚡ 0  
 Software Language Processing Suite  
 Last updated 2 months ago  


**grammarware.github.com** Shell ★ 1 ⚡ 0  
 Fork-ish repo for the website of SLPS  
 Last updated 4 months ago

**Public Activity** [RSS](#)

grammarware commented on commit [cwi-swat/rascal@9191c46729](#) 6 days ago  
 Comment in [cwi-swat/rascal@9191c46729](#):  
 One is glad to be of service.

grammarware commented on pull request [cwi-swat/rascal#8](#) Also, "Tthe" ;)

grammarware pushed to master at [SoTeSoLa/SoTeSoLa](#) 15 days ago  
 f704b54 connecting our own wiki as a submodule

grammarware pushed to master at [cwi-swat/rascal](#) 20 days ago  
 0c9e04a Merge pull request #4 from Y3PP3R/master  
 2165a79 Merge remote-tracking branch 'upstream/master'  
 fc3cdcc Removed no longer existing imports, working again  
[View comparison for these 3 commits »](#)

grammarware merged pull request [cwi-swat/rascal#4](#) 20 days ago

The screenshot shows a Twitter browser window with the following details:

- Header:** Twitter / grammarware: Met... (partially visible)
- Address Bar:** Twitter, Inc. [US] https://twitter.com/grammarware/status/238553011004264449
- Navigation Bar:** Home, Connect, Discover, Me, Search, Settings
- User Profile:** Vadim Zaytsev (@grammarware) with a green and black profile picture.
- Tweet Content:**

Metamodels can/must be used as a filter to specify the level of abstraction: what do we want to see in the system. (@jbezivin, #SoTeSoLa)
- Interaction Buttons:** Reply, Delete, Favorite
- Engagement Metrics:** 2 RETWEETS with two small user profile icons.
- Timestamp:** 10:27 AM - 23 Aug 12 · Embed this Tweet
- Reply Input:** A text input field for replying to @grammarware @JBezivin.
- Footer:** © 2012 Twitter About Help

Q (15) Academia: Why does it t x

www.quora.com/Academia/Why-does-it-take-so-long-to-get-a-Ph-D

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Academia: Graduate School Higher Education Edit

## Why does it take so long to get a Ph.D.? Edit

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Comment Share (1) Options Redirect Question

---

### 3 Answers

Vadim Zaytsev, postdoctoral researcher Edit Bio

51 votes by Ian C. Grieve, Alexander Goldfeld, Gene Familiinet, (more)

Mainly because the process of getting a doctoral degree means much more to you than the degree itself. In the beginning, you are basically a student — a good student who has finished all his or her studies, completed all necessary courses with sufficiently high grades, wrote a thesis that was approved by the supervisor and possibly a committee, and defended it by answering some questions. You have some general idea about your area of expertise, you have read some books and possibly some papers, centred mostly around the mainstream studybooks and sources that your MSc supervisor recommended. What you also probably have, is a couple of hobbies: subtopics or niches that seemed interesting for you, which you investigated and in which you invested some of your private time and effort.

When you finish your PhD:

- **You know how to write papers.** This is a skill which requires a lot of time and a lot of tries to acquire. I'm not talking here about "selling your results" in a marketing sense, but rather about packaging, narrating and successfully propagating your ideas and results to the readers. Even understanding that strong research results do not convince the readers by themselves unless you position them correctly, is a painful and nontrivial process.
- **You know how to present.** Giving a good presentation is a skill on its own, and frankly, it is not as uncommon among even younger students as it is believed to be. (Personally, I entertain the idea that I was a decent presenter since the early

W Ван Вейнгаарден, Адриан - X

← → C ⌂ ru.wikipedia.org/wiki/Ван\_Вейнгаарден,\_Адриан

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# Ван Вейнгаарден, Адриан

Материал из Википедии — свободной энциклопедии [править]

**Адриан (Аад) ван Вейнгаарден** — нидерландский учёный в области прикладной математики и информатики, заложивший основы голландской информатики и вычислительной техники. По его мнению, путь учёного в этой области должен быть тройным и включать в себя теорию вычислений, компьютерные языки и аппаратное обеспечение<sup>[1]</sup> — и именно эти три области хорошо описывают исследовательские интересы самого ван Вейнгаардена.

**Содержание** [увратить]

- [1 Биография](#)
- [2 Аспиранты ван Вейнгаардена](#)
- [3 Премия ван Вейнгаардена](#)
- [4 Источники](#)

## Биография

Ван Вейнгаарден был четвёртым сыном в браке Петера ван Вейнгаардена (1872–1924) и Лише де Брёйн (1885–1959). Был женат два раза: в 1940 на Барбаре Робберс (родила четырёх дочерей, погибла в 1958 году) и в 1960 году на Виллеке Дитц (умерла в 1977). Закончил [Делфтский технический университет](#) с дипломом инженера в 1939 году и поступил в аспирантуру к Яну Бюргерсу по [гидродинамике](#). Во время [Второй мировой войны](#) университет закрылся, и с ним закончилась и аспирантура. Учёную степень (с отличием) получил в 1945 году в том же университете, на основе результатов в области вычислений корабельных винтов написав диссертацию по теме «Некоторые приложения преобразований Фурье к задачам теории упругости»<sup>[2]</sup> и приступил к работе в [Национальной Аэрокосмической Лаборатории](#) ([англ.](#)). В следующем году был в числе отправленных в длительную командировку (с января по март) в Англию, связанную с обменом опытом, полученным во [Второй мировой войне](#), где ещё больше загорелся идеями автоматизации и создания вычислительных машин. Его подробные отчёты о встречах с английскими учёными, в том числе с [Дугласом Хартри](#) и об их изобретениях, в числе которых был [дифференциальный анализатор](#) ([англ.](#)), произвели глубоко положительное впечатление на Бизено, его руководителя<sup>[3]</sup>.

1 января 1947 года ван Вейнгаарден встал во главе вычислительного отдела [Математического центра](#), свежесозданного [научно-исследовательского института](#), который под его руководством превратился в одну из ведущих исследовательских организаций в разработке [теоретических моделей](#) для индустриальных строительных проектов, а затем и в разработке, экспериментировании и внедрении [информационных технологий](#). В 1961 году он перешёл с поста главы вычислительного отдела ([нидерл.](#) *Rekenafdeling*) на пост директора всего НИИ, на котором и оставался вплоть до ухода на пенсию в 1981 году. При этом его личный вклад был не только административным:

**Адриан ван Вейнгаарден**  
Adriaan van Wijngaarden

Дата рождения: 2 ноября 1916

Место рождения: Роттердам

Дата смерти: 7 февраля 1987 (70 лет)

Место смерти: Амстердам

Страна: Нидерланды

Научная сфера: вычислительная математика, информатика, языки программирования

Место работы: Амстердамский университет, Центр математики и информатики

Учёная степень: доктор философии

Учёное звание: профессор

Альма-матер: Делфтский технический университет

Научный руководитель: Корнелис Беньямин Бизено ([нидерл.](#))

Известные ученики:

- [Виллем ван дер Пул](#) ([англ.](#))
- [Эдсгер Дейкстра](#)
- [Гюс Заутендайк](#) ([нидерл.](#))
- [Яко де Бакер](#)
- [Райндер ван де Рит](#)
- [Маартен ван Эмден](#)
- [Петер ван Эмде Бос](#)
- [Херман те Риле](#) ([англ.](#))
- [Дик Грунен](#) ([англ.](#))

Мегамоделирование — Цик X

cyclowiki.org/wiki/Мегамоделирование

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# Мегамоделирование

**Мегамоделирование** — разновидность [моделирования](#), в котором по крайней мере некоторые элементы представляют собой другие модели, метамодели, языки, преобразования и пр. Аналогично «программированию-в-большом» (programming-in-the-large), мегамоделирование позволяет глобально подходить к описанию сложных программных систем и способствует пониманию устройства таких систем их создателями и владельцами, а также грамотной передаче информации об этом из рук в руки. То, что описывает мегамодель, иногда называется «языковой архитектурой», потому что оно пытается выразить взаимосвязь между [компьютерными языками](#) и преобразованиями между ними.

Простейшая мегамодель может выглядеть как-то так:

```

graph TD
    Г1[Грамматика1] -- "соответствует" --> Г2[Грамматика2]
    Г1 -- "определяет" --> Я1[Язык1]
    Г2 -- "определяет" --> Я2[Язык2]
    Я1 <--> Я2 : "преобразуем"
    Я1 -- "принадлежит" --> П1[Программа1]
    Я2 -- "принадлежит" --> П2[Программа2]
    П1 <--> П2 : "соответствует"
  
```

Здесь [грамматика в широком смысле](#) определяет [язык](#), элементами которого являются программы. При этом существует другая грамматика, соответствующая в некотором смысле первой, задающая верность другой структуре, которая преобразуема в первую, что означает также наличие соответствия на уровне элементов языка. В дальнейшем при необходимости «преобразуемость» может быть более детально объяснена для того, чтобы явно выразить происходящее в системе. Например,

open-notebook (page 1 of 33)

Previous Next Zoom Zoom to Fit Move Text Select Print Sidebar Search

**1** open-notebook.pdf

**2** Open Science

**3** Open ...

**4** Open source software

- Source code is available
- No usage or distribution
- No license and no rights
- No requirement of payment
- "Open source software"
- Can be reasonably used in open source environments
- Can be enough for research

**5**

**6** Open access

- A "Gold" paper
- Open publication charges often
- Open access from a journal
- A "Green" paper
- Embargo period
- Published in a journal
- Journal methods
- After peer-reviewed rigidity
- Self-archiving
- A "Silver" paper
- Includes paper after acceptance
- Controlled by traditional publishing

**7** Open research

- Open science is open collaboration
- Transparency is reproducibility
- Science is open access
- Priority is priority in practice
- You need to make the progress you want
- Through social media like the web

**8** Open notebook

- Lab notebook policies, revised by research engineers
- Replicates raw experimental data
- No replicates and no results
- No hypotheses and no theory
- No methods
- Supplementary material
- Intermediate access / delayed access

**9** Open notebook in CSSE

- From enough You must
- Free
- Use access
- Collaborative nature of open science
- Code
- Right to access
- Increase the research field!

**10** Open Notebook

**11** Automation: traces

- Documentation
- Traces
- Quarantine
- Hyperlink
- Packaging
- Publication
- Programs

- 1990 until
- Replicated work
- Documentation
- Shared raw data
- Auxiliary material

**12** Standardized conditions

**13**

**14**

**15**

**16**

**17**

**18**

**19**

**20**

**21** Technical side

- Laptops
- Ubuntu
- OpenOffice.org
- OpenOffice.org Calc
- Quoted in or action
- Communication between CSSE...
- Aggregation
- no paper form perspective

**22**

**23** Open Questions

**24** Open notebook usage

- Description of the research process
- Academic credibility
- ...
- Where are the located?
- What's new?

**25** Partiality

- Some data is not to be shared
- Focus for publishing immediate
- Answer other sets
- Where are the located?
- What's new?

**26** Problems in theory

- Documentation & communication
- Partiality
- Coordinate other publications
- own use (this for publishing of the project)
- Information flow
- no selection

**27** Problems in practice

- Incomplete automation
- unclear tagging
- conflict existing language of traditional techniques
- incorrect how papers are related
- incorrect in other possible papers
- Research ongoing, review on
- ENSO 2008/2009

**28**

**29**

**30**

**31** To summarise

- Hyperlinks to ONS
- Hyper links to previous notes
- Hyper links to literature
- Hyper links for an education
- Hyper links for accounting
- Hyper links for reporting
- Hyper links

**32** Credits

- Background note from ONS
- To help ONS
- Published in ONS (2009)
- Open Access Journal (Open Access Publishing)
- Open Access Publishing (Open Access Publishing)

**33** ONS Questions?

Мегамоделирование — Цик 2 | Vadim Zaytsev aka @grammarware

www.youtube.com/watch?v=vauFPS8wLHw&feature=plcp

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Vadim Zaytsev aka @grammarware

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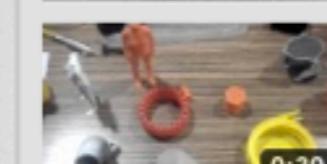


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More from Vadim Zaytsev's activity >

-  loc101demo by Joe Hackathon 24 views 5:30
-  On the Rocks - "Bad Romance" (Lady) by acappellarecords 368,246 views 4:50
-  Ultimaker 3D printer demo at WCN 2011 by Vadim Zaytsev 1,889 views 0:39

Suggestions

-  SoTeSoLa day3 SATToSE p5 by Vadim Zaytsev 15:06
-  SoTeSoLa day3 SATToSE p3 by Vadim Zaytsev

Spoonful of Hacking: Webdes

spoonfulofhacking.blogspot.nl/2009/12/webdesign-and-supercompilation.html

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# SPOONFUL OF HACKING

SUNDAY, 27 DECEMBER 2009

## Webdesign and Supercompilation

With supercompilation being a long-forgotten technique invented decades ago, and with “webdesign” term being usurped by graphic artists & HCI experts, I doubt this post will be anything close to popular, but as always, it will not stop me from expressing my opinion. But let’s take it slowly now.

Let us assume the “web design” in a good, broad sense now: not just the omnipresent “logo on the right vs logo on the left” & “10 tips to get more clicks”. Just as software design comprises multiple heterogeneous activities concerning the making of a piece of software, just as language design is about how to create a good language suited for the target domain, web design is in general about how to make a web site, a web service or a web app well.

Super-compilation is a program transformation method of aggressive optimisation: it refactors the code based on the most possible assumptions, throwing away all dead code, unused options and inactivated functionalities. It was irrelevant or at least unproductive during the structured programming epoch, but the results of super-compilation were promising before that and remain promising in our time, during the epoch of multi-purpose factory factory frameworks.

The current (at least since 1999) trend in web design is dynamics and more dynamics. The content and its presentation is separated, and most of the time what the end-user sees is what is being generated from the actual content stored somewhere in a database by using the representation rules expressed in anything from XSL to AJAX (in

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[1107.4661] MediaWiki Gram

arxiv.org/abs/1107.4661

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Computer Science > Multimedia

## MediaWiki Grammar Recovery

Vadim Zaytsev

(Submitted on 23 Jul 2011)

The paper describes in detail the recovery effort of one of the official MediaWiki grammars. Over two hundred grammar transformation steps are reported and annotated, leading to delivery of a level 2 grammar, semi-automatically extracted from a community created semi-formal text using at least five different syntactic notations, several non-enforced naming conventions, multiple misspellings, obsolete parsing technology idiosyncrasies and other problems commonly encountered in grammars that were not engineered properly. Having a quality grammar will allow to test and validate it further, without alienating the community with a separately developed grammar.

Comments: 47 pages

Subjects: Multimedia (cs.MM)

Cite as: arXiv:1107.4661 [cs.MM]  
(or arXiv:1107.4661v1 [cs.MM] for this version)

### Submission history

From: Vadim Zaytsev [view email]  
[v1] Sat, 23 Jul 2011 06:30:44 GMT (143kb,D)

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Vadim Zaytsev

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Language Evolution, Metasyn X

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## Language Evolution, Metasyntactically

Vadim Zaytsev

vadim@grammarware.net, http://grammarware.net  
SWAT, CWI, The Netherlands

**Abstract:** Currently existing syntactic definitions employ many different notations (usually dialects of EBNF) with slight deviations among them, which prevent efficient automated processing. When changes in such notation are required either due to maintenance activities such as correction or evolution, or because a grammar collection is written in a different notation than the one required by the grammarware toolkit, we speak of metalanguage evolution: i.e., a special language evolution scenario when the language itself does not necessarily evolve, but the notation in which it is written, does. Notational changes need to be propagated to different levels, such as to parsers that used to work with the old notation, to grammars of those notations that served as explanation material, and to the existing grammarbase.

The solution proposed in this paper, relies on composing a notation specification and expressing notation changes as transformations. The transformation steps are coupled to changes in the grammars (and to changes in other grammars) and to changes in other grammars. This paper explains the general setup of such an infrastructure, with links to the prototypical implementation of the solution.

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BNF was here x

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**BNF was here: what have we done about the unnecessary diversity of notation for syntactic definitions**

Full Text: [PDF](#)

Author: [Vadim Zaytsev](#) Software Analysis and Transformation Team, Centrum Wiskunde en Informatica, Amsterdam, The Netherlands

Published in:

- Proceeding  
[SAC '12](#) Proceedings of the 27th Annual ACM Symposium on Applied Computing  
Pages 1910-1915  
[ACM](#) New York, NY, USA ©2012  
[table of contents](#) ISBN: 978-1-4503-0857-1 doi:>[10.1145/2245276.2232090](https://doi.org/10.1145/2245276.2232090)

 2012 Article

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# Open notebook entry

- Unique id
  - VVZxxxx, e.g. VVZ1362
  - Cf. EWDxxx

[VVZ1362] (1 Apr 2012)

- Gave a talk, got lots of feedback. Among others, from Adrian Johnstone: “where do you get such bad grammars at all? I’ve tried recovery, and it all works smoothly”.
- Related to the presentation *Notation-Parametric Grammar Recovery*.

# Open notebook entry

- Unique id
  - VVZxxxx, e.g. VVZ1362
  - Cf. EWDxxx
- Linked to an action
  - commit/tweet/answer/wikiedit/DOI/...
- Tagged as related
  - to a paper/effort/project/topic

Dr. Vadim Zaytsev — Partial

grammarware.net/opens/2012.html#VVZ1633

[VVZ1633] (30 Jul 2012)

- done with FSE.
- added ATEM to SLE.
- Committed to [Conferences Wiki](#) at GitHub as revision [52711c8a062402691ff79a6e069120c9b2e124b2](#).

[VVZ1634] (30 Jul 2012)

- +FOSD.
- Committed to [Conferences Wiki](#) at GitHub as revision [9caa6ef25717c435f1e1ec9428fefaca97bd0247](#).

[VVZ1635] (30 Jul 2012)

- updated the website with recent stuff (i.e., Guided Convergence Report on arXiv).
- Committed to [Personal Work](#) at BitBucket as revision [0f7045c793368d3df7752c39a0e0530da791e5b5](#).

[VVZ1636] (31 Jul 2012)

- very early draft of the negotiated transformations paper (XM?).
- Related to the paper [\*Negotiated Grammar Transformation\*](#) (VZ, 2012).
- Committed to [Personal Work](#) at BitBucket as revision [5c721ba2e484140f3173499df5cb2234ef782ca1](#).

[VVZ1637] (31 Jul 2012)

- Turing Machine programming: minor adjustments & misspellings.
- Committed to [Turing LEGO](#) at GitHub as revision [c56374c902aee33d99dab1c6321279877cdd13b2](#).

[VVZ1638] (31 Jul 2012)

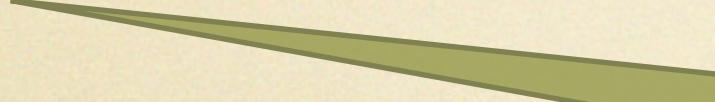
- lang::rascal::format::Escape::makeStringChar() contained multiple errors with the bases.
- Committed to [Rascal MPL](#) at GitHub as revision [aa99b5dadba0dd8ae69d33b951c5b84e50a2a5a9](#).

August 2012 (23 entries)

# Open Questions

# Open notebook usage

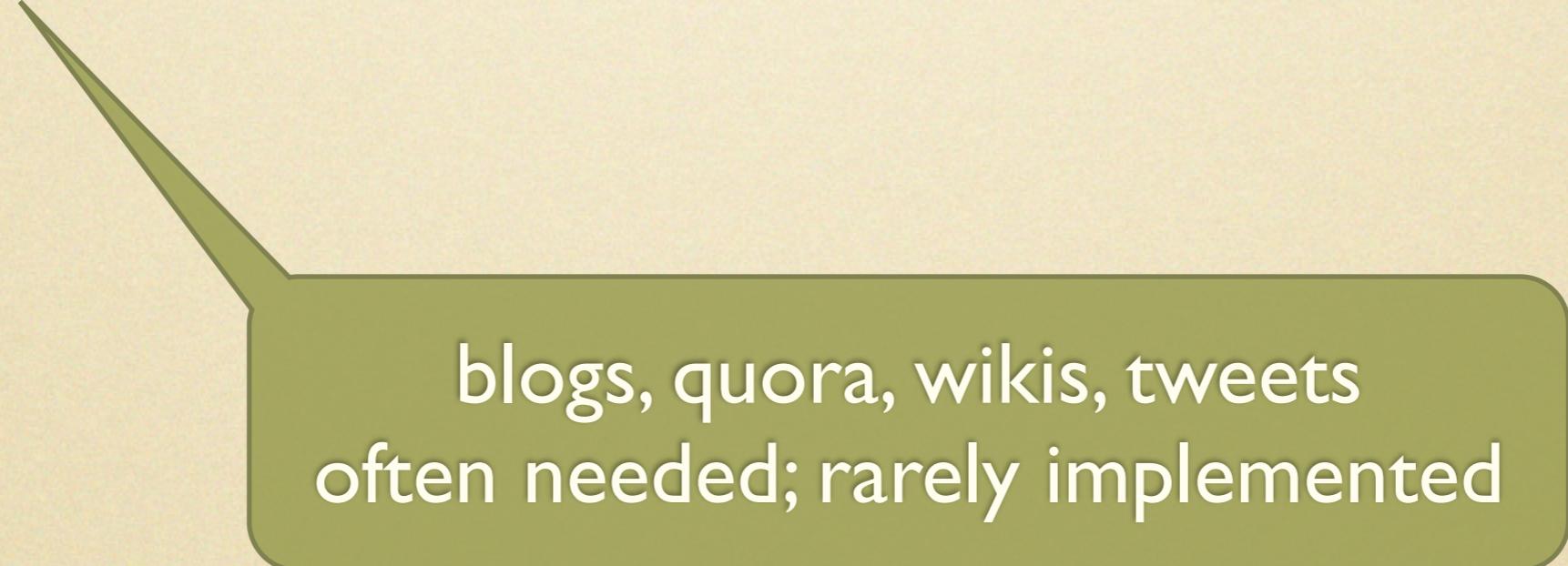
- Streamlined self-archiving



many scientists already achieved this

# Open notebook usage

- Streamlined self-archiving
- Advanced self-archiving



blogs, quora, wikis, tweets  
often needed; rarely implemented

# Open notebook usage

- Streamlined self-archiving  
how many tries did it take?
- Advanced self-archiving  
how much time?
- Documentation of the research process

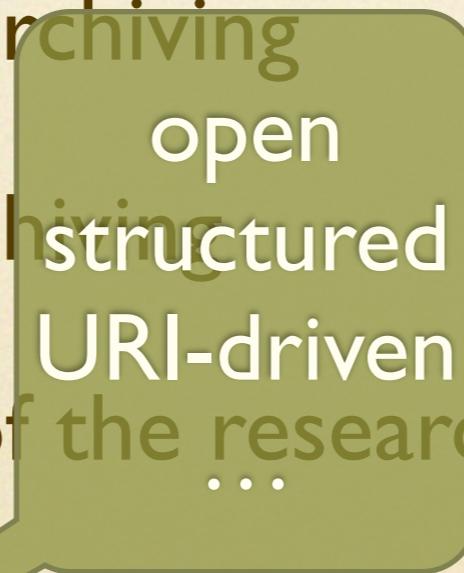
# Open notebook usage

- Streamlined self-archiving
- Advanced self-archiving
- Documentation of the research process what sources were used?
- Academic traceability

# Open notebook usage

- Streamlined self-archiving
  - Advanced self-archiving
  - Documentation of the research process
  - Academic traceability
  - Mining ~~software repositories~~ open notebooks
- 
- how others do it?

# Open notebook usage

- Streamlined self-archiving
  - Advanced self-archiving
  - Documentation of the research process
  - Academic traceability
  - Mining ~~software repositories~~ open notebooks
  - Linked data
- 

# Open notebook usage

- Streamlined self-archiving
- Advanced self-archiving
- Documentation of the research process
- Academic traceability
- Mining ~~software repositories~~ open notebooks
- Linked data

# Partiality

- Some data is not to be shared
- Prepare for publishing immediately
- Release when safe
- Where are the borders?
- Is it “honest”?

# Problems in theory

- Data theft & content theft
  - partiality
- Constitutes prior publication
  - don't use ONS for publishing (cf. Wikipedia)
- Information flood
  - no solution

# Problems in practice

- Incomplete automation
  - smarter tagging?
- Useful querying languages/tools/technologies
  - expose how papers are related
  - connect to other people's papers
- Research ongoing, please join
  - grammarware.net

grammarware.net/does/testing.html

## Research topic: Grammar-based Testing

### Related people

- [Dr. Bernd Fischer](#) [[DBLP](#)]
- Jörg Harm [[DBLP](#)]
- [Prof. Dr. Ralf Lämmel](#) [[DBLP](#)]
- [Prof. dr. ir. Robert van Liere](#) (unofficial visualisation consultant) [[DBLP](#)]
- [Dr. Wolfram Schulte](#) [[DBLP](#)]
- [Dr. Vadim Zaytsev](#) [[DBLP](#)]

### Related publications

- [\*Two-dimensional Approximation Coverage\*](#) (JH, RL, 2001) in Informatica.
- [\*Grammar Testing\*](#) (RL, 2001) in FASE 2001.
- [\*Test Case Characterisation by Regular Path Expressions\*](#) (RL, JH, 2001) in FATES 2001.
- [\*Combinatorial Test Set Generation: Concepts, Implementation, Case Study\*](#) (VZ, 2004).
- Assessing XML Validators (VZ, RL, 2005). Unfinished draft.
- [\*Controllable Combinatorial Coverage in Grammar-Based Testing\*](#) (RL, WS, 2006) in TestCom 2006.
- [\*Comparison of Context-free Grammars Based on Parsing Generated Test Data\*](#) (BF, RL, VZ, 2011) in SLE 2011.
- [\*Comparison of Context-free Grammars Based on Parsing Generated Test Data\*](#) (BF, RL, VZ, 2012) in SLE 2011.

### Related presentations

- [\*A .NET-based Test-Data Generator for Combinatorial Grammar- and Schema-based Testing\*](#) (VZ, April 2004) at Vrije Universiteit, Amsterdam, The Netherlands.
- [\*Combinatorial Test Set Generation: Concepts, Implementation, Case Study\*](#) (VZ, June 2004) at Universiteit Twente, Enschede, The Netherlands.
- [\*Comparison of Context-free Grammars Based on Parsing Generated Test Data\*](#) (VZ, July 2011) at SLE 2011.
- [\*Cheating on the Undecidability of Language Equivalence\*](#) (VZ, April 2011) at SEM.
- [\*Quite an introduction to grammar-based testing\*](#) (RL, March 2012) at UNO Computer Science.

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## Related open science links

- Open Notebook entries in 2005: [[VVZ3](#)]
- Open Notebook entries in 2006: [[VVZ34](#)]
- Open Notebook entries in 2007: [[VVZ48](#)]
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[[VVZ1063](#)] [[VVZ1064](#)] [[VVZ1065](#)] [[VVZ1067](#)] [[VVZ1072](#)] [[VVZ1080](#)] [[VVZ1137](#)] [[VVZ1139](#)] [[VVZ1140](#)]  
[[VVZ1143](#)] [[VVZ1144](#)] [[VVZ1161](#)] [[VVZ1162](#)] [[VVZ1163](#)] [[VVZ1164](#)] [[VVZ1169](#)]
- Open Notebook entries in 2012: [[VVZ1318](#)] [[VVZ1323](#)]

## Related events

- [Fourth International Conference on Software Language Engineering](#) (SLE 2011)
- [Software Engineering Meeting](#) (SEM)
- [Fundamental Approaches to Software Engineering](#) (FASE 2001)
- [Formal Approaches to Testing of Software](#) (FATES 2001)
- [The 18th IFIP International Conference on Testing Communicating Systems](#) (TestCom 2006)

## Related web pages

- <http://slps.sourceforge.net/testmatch/> (maintained by [Vadim Zaytsev](#))
- <http://softlang.uni-koblenz.de/testmatch/> (maintained by [Ralf Lämmel](#))
- [More than you ever wanted to know about grammar-based testing](#) (maintained by [Ralf Lämmel](#))
- [Meta-data driven test-data generation with controllable combinatorial coverage](#)
- [SLPS Grammar Zoo](#) (maintained by [Vadim Zaytsev](#))
- [SLPS Grammar Tank](#) (maintained by [Vadim Zaytsev](#))

Dr. Vadim Zaytsev — Partial Dr. Vadim Zaytsev — Gramm

grammarware.net/does/recovery.html

Related open science links

- Open publication: [\*Recovering Grammar Relationships for the Java Language Specification\*](#) (RL, VZ) in CoRR.
- Open publication: [\*MediaWiki Grammar Recovery\*](#) (VZ) in CoRR.
- Figshare data: [\*BNF WAS HERE: What Have We Done About the Unnecessary Diversity of Notation for Syntactic Definitions\*](#).
- Open Notebook entries in 2005: [VVZ5] [VVZ7] [VVZ9] [VVZ11]
- Open Notebook entries in 2006: [VVZ16] [VVZ19] [VVZ23]
- Open Notebook entries in 2007: [VVZ40] [VVZ41] [VVZ42] [VVZ43] [VVZ52] [VVZ58] [VVZ59] [VVZ68] [VVZ71] [VVZ73] [VVZ75] [VVZ77] [VVZ80] [VVZ81] [VVZ82]
- Open Notebook entries in 2008: [VVZ95] [VVZ101] [VVZ103] [VVZ104] [VVZ106] [VVZ223] [VVZ225] [VVZ227] [VVZ228] [VVZ229] [VVZ231] [VVZ232] [VVZ233] [VVZ234] [VVZ235] [VVZ237] [VVZ238] [VVZ240] [VVZ241] [VVZ242] [VVZ243] [VVZ244] [VVZ246] [VVZ350] [VVZ363]
- Open Notebook entries in 2009: [VVZ370] [VVZ427] [VVZ428] [VVZ430] [VVZ500] [VVZ546] [VVZ548] [VVZ554] [VVZ564] [VVZ593] [VVZ601] [VVZ632] [VVZ633] [VVZ638] [VVZ644] [VVZ645] [VVZ660] [VVZ665] [VVZ666] [VVZ669] [VVZ682] [VVZ691] [VVZ713] [VVZ715] [VVZ716] [VVZ717] [VVZ718] [VVZ720] [VVZ735] [VVZ748]
- Open Notebook entries in 2010: [VVZ814] [VVZ815] [VVZ818] [VVZ820] [VVZ823] [VVZ824] [VVZ825] [VVZ826] [VVZ858] [VVZ884] [VVZ885] [VVZ896] [VVZ897] [VVZ905] [VVZ946] [VVZ968]
- Open Notebook entries in 2011: [VVZ997] [VVZ1088] [VVZ1089] [VVZ1106] [VVZ1108] [VVZ1111] [VVZ1112] [VVZ1113] [VVZ1114] [VVZ1115] [VVZ1116] [VVZ1117] [VVZ1123] [VVZ1124] [VVZ1126] [VVZ1131] [VVZ1132] [VVZ1133] [VVZ1134] [VVZ1135] [VVZ1138] [VVZ1142] [VVZ1146] [VVZ1147] [VVZ1148] [VVZ1149] [VVZ1150] [VVZ1151] [VVZ1152] [VVZ1157] [VVZ1159] [VVZ1160] [VVZ1163] [VVZ1166] [VVZ1167] [VVZ1168] [VVZ1172] [VVZ1188] [VVZ1195] [VVZ1200] [VVZ1201] [VVZ1204] [VVZ1205] [VVZ1216] [VVZ1219] [VVZ1220] [VVZ1234] [VVZ1235] [VVZ1236] [VVZ1237]
- Open Notebook entries in 2012: [VVZ1267] [VVZ1294] [VVZ1327] [VVZ1329] [VVZ1330] [VVZ1347] [VVZ1351] [VVZ1352] [VVZ1354] [VVZ1359] [VVZ1362] [VVZ1481] [VVZ1499] [VVZ1520]

## Related events

- [\*Summer School on Generative and Transformational Techniques in Software Engineering\* \(GTTSE 2005\)](#)
- [\*Fourth Workshop on Dynamic Languages and Applications\* \(DYLA 2010\)](#)
- [\*Programming Environment Meeting\* \(PEM\)](#)
- [\*Software Engineering Meeting\* \(SEM\)](#)

# To summarise

- “Open” is PD, CC-BY, CC-BY-SA
- Open source principles for science!
- Open access for dissemination
- Open research for collaboration
- Open notebook for traceability
- Openness for reproducibility!
- ID with timestamp, action, tags
- Many open questions



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# Questions?

[vadim@grammarware.net](mailto:vadim@grammarware.net)

