

What teachers really need from us

Selena Deckelmann

selena@mozilla.com

@selenamarie



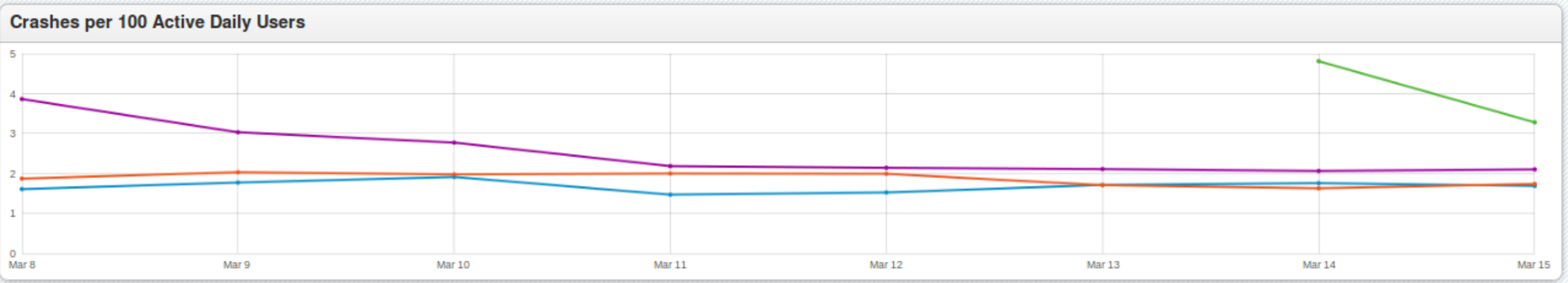
mozilla crash reports

Find Crash ID or Signature

Product: Firefox Current Versions Report: Overview

Advanced Search

Firefox Crash Data 3 days 7 days 14 days Date Range: By Crash Date By Build Date



Crash Reports			
Firefox 22.0a1	Firefox 21.0a2	Firefox 20.0b5	Firefox 19.0.2
Top Crashers	Top Crashers	Top Crashers	Top Crashers
Top Changers	Top Changers	Top Changers	Top Changers
Top Plugin Crashers	Top Plugin Crashers	Top Plugin Crashers	Top Plugin Crashers





What is this about?

Reaching out to teachers is worth your time.

Teachers are natural allies:

- Optimists
- Resource constrained
- Experts
- Love creating learning communities

Teachers need help:

- Underfunded
- Jobs are at-risk
- Generally isolated in their work
- Typically 1 hr of prep for 7 hrs of class
- Mostly not at their computers during the day
- Mostly not into social networking for work

More about state of K-12 CS edu:

<http://tinyurl.com/bjeglj3>

How do I teach people what algorithms are?

A deadline:
30 women
One weekend
Intro to Python

First plan:

Look up famous algorithms on wikipedia
and teach one of them

- What is the goal?
- Who is the audience?
- What should they know at the end?

- *What is the goal?*

Ease fears of math that's "required" for programming

- *Who is the audience?*

People who have never programmed before

People who have not programmed in Python

- *What should they know at the end?*

Start to decompose problems

and a *memorable* and *relevant* definition of algorithms

Algorithms are recipes

- demo'd "making PB&J"
- workshop: write out procedures for getting by (bus|car|taxi|friend) from airport to home



Realization:

I don't know how to do this again.

I need expert help.

Who can teach 30+ beginning students
efficiently?

K-12 teachers

Talking is scary...
Let's do some reading.

Unlocking the Clubhouse
Stuck in the Shallow End
"Running on Empty" report

But wait... let's give some talks.

FroSCon Keynote
DjangoCon Keynote

... and I met a few teachers.

Thought – maybe I should go local!

Oregon: 200+ districts, 40 CS programs

No commonly recognized CS certification

Most programs are elective and may not be
taught every year

1. ~~Ask Friends~~
2. ~~Give talks at tech conferences~~
3. ~~Contact Computer Science Teachers Assoc.~~
4. Twitter (and then Facebook)
5. SERENDIPITY: Non-profit! TechStart.org
6. **Email schools directly (thanks code.org)**

Over the last 12 months:

Found 9 teachers
to have in-depth conversations

This is a start.

Connecting teachers starts with
adapting a few of us to work with them.

Think of it as rev 0 of the human API.

How to work with teachers
on *ideas* and *in person*
rather than with software.

1) EMPATHY

- Try to teach something to a beginner
- Ask someone to use your documentation
- Use your own documentations

2) RESEARCH

- ACM and CSTA
- “Running on Empty” report
- US Census data on jobs

3) FIRST CONTACT

- List of question (here have this:
<http://piratepad.net/teacher-connect-questions>)
- FIND THEM (See slide 13)
- Identify next actions (see next slide)

4) ACTIONS

- Speak in classes
- Meet with teachers
- Swap lessons
- Practice your lessons on adults
- Use pre and post assessments with your teaching

5) APPLY WHAT YOU LEARN

- Connect with students
- Test your teaching
- Teach lessons more than once

- 1) Empathize
- 2) Research
- 3) First Contact
- 4) Build a relationship with a teacher
- 5) Apply what you learn

Python Education Summit

<http://wiki.python.org/moin/EducationSummit>

Go to <http://code.org>

Find a school

Email a teacher and CC me: selena@mozilla.com

Hi!

I'm trying to connect with K-12 teachers in the Portland area who teach either computer science or programming.

I am teaching programming classes to women as part of PyLadies. So far, I've taught basic python syntax, git + github and command-line classes. I'm hoping to connect with a teacher who can tell me about their classes and have a short chat with me about their impressions of open source, Python and any thoughts they have about what Python community members could do to be more useful to K-12 teachers.

Thanks!

Hello!

My name is Selena and I work for Mozilla, creators of the Firefox web browser. I'm a data architect and a volunteer teacher for women who want to learn how to program.

I am seeking out teachers in the Portland area that teach computer science. I am teaching about 90 women who are new to technology how to program, and am hoping to just have a short chat with the teachers who are part of the AP computer science program offered at your school.

I'm happy to offer myself or one of the women as a guest speaker in a classroom, and can meet in person or over the phone. I just visited Chris Bartlo at Wilson, and am looking forward to speaking to his class later this semester.

Thanks for your time!!

Reaching out to teachers is worth your time.

Do this with me. :)

What teachers really need from us

Selena Deckelmann

selena@mozilla.com

@selenamarie