A Gross Of Weeklies

Elizabeth Mattijsen 25 August 2017

"Moadern Weeklies"

- Perl 6 Weeklies since 7 February 2014.
- Just after MoarVM got introduced.
- (Temporarily) restarted by Timo Paulssen.
- (Temporarily) taken over by Elizabeth Mattijsen.
- Older ones seemed to have vanished in the mists of time.

Early 2014

- Rakudo Perl 6 had 3 functional backends:
 - 1. parrot
 - 2. JVM
 - 3. MoarVM
- and 1 almost functional installer:
 - 1. panda

Early 2014

- Execution speed was very sub-optimal.
- Bugs in one backend were interfering with other backends.
- Inconsistencies in parameter / list / array handling.
- Async options were still in embryonal stage.
- No Unicode grapheme support yet.
- No native variables.

A New Era

- http://p6weekly.wordpress.com
- The place to get your weekly dose of Perl 6 news!
- So what has changed since then?
- Let's start at the beginning...

on 7 February 2014 Timo Paulssen posted this:

Weekly changes in and around Perl 6

Off we go!

I've been missing my weekly fix of Perl 6 changes ever since GlitchMr stopped posting.

That's why I decided to (at least temporarily) pick up the torch and continue the march!

Here's to a good start!





The result so far:

2014.14: Speshial things Week 15: Performance Work continued 2014.16: release, asyncoronous I/O, tim 2014.17: Supplies tall and contex 2014.18: More supplies operations and 2014.19: Moar spesh, politically and 2014.20: Conference, CPAR Spess 2014.21: NLPW2014 recordings, blead Belated: 2014.22 (and pieces of 2014.23 2014.23: Beginning of inlining, some GS 2014.24: Inlining, some more JIT, a bit of 2014.25: optimizations, more CPAN, mo 2014.26: On-Stack-Replacement, stability 2014.27½: A boat load of stuff, pointer at 2014.28: Moar jit, string overhaul, metact 2014.30 & 2014.31: A release, upcoming 2014.31 (for real this time): Weeks 32 and 33: 2014.34: chugging along, GSoC is over, 2014.35: A Star Release, perl5 interop, and 2014.36: Finalization, lazyness, optimizat 2014.37: Inline::Perl5, C Globals in Nativ 2014.38 and 39: Star release and stuff 2014.40: 2014.41 & .42: APW, GLR progress, Perl 2014.43: Release ahoy! 2014.44: A continuous trickle of stuff 2014.45: Perl6 gets a release year 2014.46 and 47: a release, optimizations 2015.01 Get ready to Party! 2015.02 The beginning of the Party has 2015.03 Gathering Up Steam Again 2015.04 Gotanda Lands 2015.05 FOSDEM happened 2015.06 In the wake of FOSDEM	2015.20&21: Blogs, Grant, Release and Progres 2015.22: While async & conc are still a bit crash 2015.2325 Catching Up Is Hard To Do 2015.26 Half-way through the year 2015.27 It was HOT 2014.28: Title goes here. Fill out under all circur 2015.29/30 FastForwarding To The Present 2015.3 Blogging Along 2015.4 The Doset Of Upheaval 2015.5 Grant List Refactor is picking up to 2015.4 Alor Fole: 2015.42 Univeilin 2015.43 Vernacul Engli 2015.44 Niceville 2015.45 Grapheme Clustening 2015.47: The Knights Who Fail Nil 2015.48/49 Arrays Shape Up, Curli Lands and Scotts. UPD, DUP, PUD, DPU, and other perm 2015.52: Closer and closer to the Release 2015.53: It is out! 2016.1,2,3 What Are We Waiting 4? 2016.5,6 Rakudo Starring 2016.7 More Versioning 2016.8 YACR 2016.9 Blobs Leaping Away 2016.11 JS Fueling Up 2016.12 Less Happening 2016.13 A Language For Heapsters 2016.14 Wow, Zoffix! 2016.15 Wow, Blogs! 2016.16 A Quick One From Dublin 2016.17 Making our Introductions	2016.24 Speeding To TPC 2016.25 A Quick One From Orlando 2016.26 Another Quick One From Orlando 2016.27 Summer Starts 2016.28 Show Your Papers! 2016.29 The Zoffix Has Landed 2016.30 Fresh Rakudo Star! 2016.31 An End Of An Era 2016.32 A Quiet Week 2016.33 Where did we go wrong? 2016.34 A Quick Botch From Cluj 2016.35 A Quick One From Zagreb 2016.36 Introdução ao Perl 6 2016.37 Warmen Up Das YouTuben! 2016.38 We Are The Robots 2016.39 Keys To Cover Moar Tests 2016.40 Pull up to the Hacktoberfest 2016.41 The Answer Is Near 2016.42 Release Time 2016.43 Shining Star 2016.45 Shapes Get A Boost 2016.45 Shapes Get A Boost 2016.45 Chapters 2016.46 Alij	2017.15 Kaboom! (1) 2017.16 IO Hits The Ro 2017.17 Interesting Tir 2017.18 Starlight, Star 2017.19 Albatross_I 2017.20 Crossing The 2017.21 YAP6B 2017.22 Up Handle En 2017.23 Fulfilled TAP 2017.24 Synchronicity 2017.25 [*] @perl-6-bo 2017.26 Half Way Ther 2017.27 Inching On Sp 2017.28 Rakudo is Hot 2017.29 Zoffix Release 2017.30 Starring Fresh 2017.31 Moar Smaller 2017.32 Weekly 101 2017.33 In Review 2017.34 Going
2015.04 Gotanda Lands 2015.05 FOSDEM happened	2016.15 Wow, Blogs! 2016.16 A Quick One From Dublin 2016.17 Making our Introductions 2016.18 Long Awaited Landings 2016.19 Summer Strikes	2017.10 ≤ It's all relative ≥ 2017.11 Tidy Da Tags	

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This presentation?

- Result of going through the weekly archives.
- A real trip down memory lane for me.
- Things that struck me and felt important to note.
- Features of Rakudo Perl 6 that people should know about.
- And other diversions.

What was different?

- Older summaries about #perl6 channel only.
- Logs of #perl6 channel kept since 26 February 2005.
- New summaries were less about what people said.
- And more about what people did, on or off channel.
- Generally more meta, less precise.
- Later, more PR oriented.

The last "old" style, May 2013:

<u>May 1</u>:

- labster campaigned for nqp::readlink to support some of his recent changes and got pmichaud and timotimo to help.
- pmichaud landed some commits that impact Rakudo Star, and prepared a Star release candidate.
- FROGGS landed v5 slang module commits, mostly experimental.
- The #masakism workshop began; after it was over masak reported "quick summary of today's #masakism workshop: it was a success, people appear to want to do it again, date not set for that, but we'll make sure people get the message.".
- timotimo implemented unlink, cwd, rename, copy, link, symlink, and improved rmdir, for Rakudo-NQP-JVM. But seems "Java has no portable way to chdir?"
- · inthn landed a ton more Rakudo-NQP-JVM commits.
- hoelzro noted he "would like to do for @pairs -> (\$first, \$second)" or similar, such that for each pair \$first is bound to the key, \$second to the value. Discussion ensued about related parameter unpacking syntax.
- pmichaud landed more Match/Nil switchover commits.
- pmurias asked "would it make sense for me to submit a gsoc proposal for a rakudo/nqp
 javascript backend to the parrot foundation?". Discussion ensued with Util saying "I am
 the GSoC backup admin for PaFo, and defacto primary admin while dukeleto is away. I
 will look favorably and equitably on any Perl[56]-related tasks, students, mentors, or
 anything else related.".

Just too much work!

Sometimes I was reminded of cool features

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```
my %h = a \Rightarrow 1, b \Rightarrow 2;
for %h.pairs {
     my $key := .key;
     my $value := .value;
     dd $key, $value
Str $key = "a"
Int value = 1
Str $key = "b"
Int value = 2
```

Sometimes I saw abandoned projects

cariuluate.

FROGGS landed v5 slang module commits, mostly experimental.

- 1 May 2013
- The #macakiem workshop began: after it was over macak reported "quick summany of
 - Alas, the v5 slang has bitrotted.
 - And the Pumpkin Perl 5 syntax has become a moving target.
 - Maybe a restart using the Perlito Perl 5 grammar is an option?
 - Anyone interested working with Flavio Glock?
 - Then contact me (or Flavio!)

Sometimes one gets sad about absent friends

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Hopefully we will see them back again sometime in the next 96 years!

Regularly

An interesting thing to point out is that the first 6 items on this list have been done by TimToady, who has left his self-imposed exile from the implementor's side of Perl6. Jnthn didn't have much time during the week, so I have no big achievements to report for the multithreading support on MoarVM.

3 March 2014

People come back!

Some projects

- At the same time, FROGGS has been moving the integration of PAUSE (Dependent programming author's upload server) with Perl6 and it sounded like there'll be a big announcement this or next week regarding that whole complex :
- Another thing lignest did (the week before this and) was improving arror

integrating the Perl 6 Ecosystem into the Perl toolchain. Yes ou can now upload your Perl 6 module to CPAN using Shoichi Kaji's mi6, and install it 16 May 2017 using Nick Logan's zef. And that all without interfering with the indexing and

take a lot longer!

VM Tectonics

On the spectest side, 2 new tests were added. Niecza got 0.01% closer to the current's reading implementation, which is rakudo-jvm. rake lo-moar got 40 more passing tests and reached 99.51% of rakudo-jvm, an improvement of 0.13%. rakudo-parrot stayed at 99.72% of rakudo-jvm.

10 February 2014

Spectes—wise, Rakudo—moar is still at the 100% spot with Rokudo—jvm at 99.27% and Rakudo—parrot is now down to 99.00% relative to Rakudo—moar. I imagine that is the good Unicode DB support we have in MoarVM. When the concurrency branch of MoarVM is merged to master, that lead will increase even more. Oh my!

```
All tests successful.
Files=1223, Tests=67668, 275 wallclock secs
(13.98 usr 5.24 sys + 1861.57 cusr 194.07 csys = 2074.86 CPU)
```

The Birth of a SubSystem

In the new and shiny "spesh" branch of MoarVM, jnthp has published his work for creating a Control Flow Graph and Single Static Assignment representation of MoarVM bytecode that can then be optimized based on a "facts database". In particular, the following optimizations for this "bytecode specializer" have been created so far:

 7 April 2014

Providing the optimizing info

And another Birth

The Perl Foundation has been <u>accepted for Google's Summer of Code</u> with the following projects:

 brrt will be developing a JIT compiler for MoarVM. He l be blogging about his progress on a <u>blog he set up for the project</u>.

21 April 2014

Production ready (almost)

And yet another Birth

• jnthn added ne very first steps towards an On-Stack-Replacement operation. OSR is required to optimize hot for loops, for example. Usually, we trigger optimization when a function is called often enough, but with such a for loop, all we do is jump back over the same code over and over. Instead of "jump to this different function", OSR has to directly jump over into optimized bytecode (or jitted bytecode) and make sure variables on the stack and exception handlers and all those things are kept in order. 24 June 2014

Sometimes

- The implementation and semantics of "winner" have been refined further by lizmat
 14 April 2014
- the "more" method on Supplies has been renamed to "emit" and the
 "winner" keyword has been renamed to "earliest".
 20 October 2014

```
react {
    whenever Supply.interval(2) -> $v {
        say $\frac{1}{2} \\
        done() if $v == 4;
    }
}
```

I takes a while to figure it out

Sometimes real news!

be up in "a matter of weeks" ... Jithin did a talk on concurrency and a talk on Kakudo performance advances, in which he revealed he's been working on a profiler in secret. That was a pretty "wow" moment for pretty much all of the Perl6 community! There was also a talk by masak about goto and why it's 26 August 2014

So last week Larry Wall made quite a splash when people noticed that <a href="mailto:the-noticed-the-n

And some destruction

jnthn implemented finalizer support (giving your classes a DESTROY method or submethod that will be invoked when the object gets collected by the GC) on MoarVM and exposed it to rakudo. Now nine will be in a much better position to work on the Inline::Perl5 module!
 8 September 2014

but not in an orderly fashion!

YABOAF

 Another neat little thing lizmat added was the beginning of a "dd" sub that dumps variables' contents together with their name to stderr.

1 October 2014

Rakudo only

An important blogpost

moritz++ wrote a very interesting blog post about why it is so hard to write a compiler for Perl 6. There were quite some comments on Reddit.

16 March 2015

- Static vs. Dynamic
- Mutable Grammar
- Meta-Object Programming
- Mixing of compilation and run time
- Serialization, Repossession
- General Featuritis

We're only human

ZUTO.ST DIOGGING AIONG

```
2015.32 The Great List Refactor is picking up lots of steam!
2015.33: The Great List Refactor is picking up lots of steam!
2015.34-40 Birthday!
2015.51: UPD, DUP, PUD, DPO, and other permutations
2015.52: Closer and closer to the Release
2015.53: It is out!
2016.1,2,3 What Are We Waiting 4?
2016.5,6 Rakudo Starring
2016.7 More Versioning
```

A big push is exhausting

Off we go!	2015.10 FOSDEM Videos and Role Conflicts	2016.21 A Quick One From Houston	9
			_
Changes during week 6 of 2014	2015.11 Native arrays arrive	2016.22 Conference Season Taking Off	4
Changes during week 7 of 2014	2015.12: A release. Also, lazy deserialization ma	2016.23 Friendlier Bisecting	2
Changes since release 2014.02	2015.13: The first weekly of 2015 that won't be	2016.24 Speeding To TPC	2
•	2015.14: Happy easter, enjoy your unsigned typ		_
Changes during Week 9 of 2014			_
Changes during Week 10 of 2014	2015.16 + 17: A release, NFG and more GLR w	2016.26 Another Quick One From Orlando	2
Week 11 of 2014	2015.18: Startup time rectified, hashes unordified	2016.27 Summer Starts	2
2014.12: Release Week, GSoC, and Gar	·	2016.28 Show Your Papers!	2
· · · · · · · · · · · · · · · · · · ·		•	
	2015.20&21: Blogs, Grant, Release and Progre		
2014.14: Speshial things	2015.22: While async & conc are still a bit crash	2016.30 Fresh Rakudo Star!	
Week 15: Performance Work continued	2015.2325 Catching Up Is Hard To Do	2016.31 An End Of An Era	2
2014.16: release, asynchronous I/O, tim	• •	2016.32 A Quiet Week	9
			_
2014.17: Supplies talk and sundry	2015.27 It was HOT	2016.33 Where did war gow on the	2
2014.18: More supply ops, loop labels, I	2014.28: Title goes here. Fill out under all circur	2016.34 A Quick Rotan From Ciuj	2
2014.19: Moar spesh, portability, cpan.	2015.29/30 FastForwarding To The Present	2016.35 A Gail Cone From Zagreb	2
2014.20: Conference, CPAN progress ar	_	2016 16 Intindução ao Perl 6	
			_
2014.21: NLPW2014 recordings, release		6.3 Warmen Up Das YouTuben!	2
Belated: 2014.22 (and pieces of 2014.23	2015.33: The Great List Refactor is picking up	2 10.58 We Are The Robots	2
2014.23: Beginning of inlining, some GS		2016.39 Keys To Cover Moar Tests	2
2014.24: Inlining, some more JIT, a bit o		2016.40 Pull up to the Hacktoberfest	
		•	2
2014.25: optimizations, more CPAN, mo		2016.41 The Answer Is Near	
2014.26: On-Stack-Replacement, stabili	2015.43 Vernacular in tist	2016.42 Release Time	
2014.271/2: A boat load of stuff, pointer a	2015.44 Niceville	2016.43 Shining Star	
2014.28: Moar jit, string overhaul, metac	2015,45 and eme Clustering	2016.44 Увод в Perl 6	
2014.30 & 2014.31: A release, upcoming		2016.45 Shapes Get A Boost	
and the control of th			
2014.31 (for real this time):	2 5. The Knights Who Fail Nil	2016.46 Tweaking Cheaters	
	2015.48/49 Arrays Shape Up, Curli Lands and	2016.47 Perl 6 入门	
2014.34: chugging along. GSo is ver,	2015.50: Adventing Commences	2016.48 Kickstarting Along	
	2015.51: UPD, DUP, PUD, DPU, and other perm	2016 40 It's Looking A Lot Like Blog Posts	
2014 36: Finalization la un ses optimiza	2015.52: Closer and closer to the Release		
		2016.50 Highlighting & ProfileSQL	
2014.37 In the: Ye. 5, C Globals in Nativ	2015.53: It is out!	2016.51 Flowing Towards Christmas	
20 38 and Star release and stuff	2016.1,2,3 What Are We Waiting 4?	2016.52 Twittering Towards The End	
201-4	2016.5,6 Rakudo Starring	2017.01 Glancing At A Prime Time	
2014-1 & .42: APW, GLR progress, Per	•	2017.02 Dogfooding and Powerbotting	
2014.43: Release ahoy!	2016.8 YACR		
•		2017.03 (woman gesturing OK)	
2014.44: A continuous trickle of stuff	2016.9 Blobs Leaping Away	2017.04 Welcome!	
2014.45: Perl6 gets a release year	2016.10 Enchanté!		
2014.46 and 47: a release, optimization	2016.11 JS Fueling Up	2017.05 A Week Of Blue Mondays	
2015.01 Get ready to Party!	2016.12 Less Happening	2017.06 Fosdem After Math	
		2017.07 More Than One Zero	
2015.02 The beginning of the Party has		2017.08 Evolving Slangs	
2015.03 Gathering Up Steam Again	2016.14 Wow, Zoffix!		
2015.04 Gotanda Lands	2016.15 Wow, Blogs!	2017.09 The IOs Are A-Changin'	
2015.05 FOSDEM happened	2016.16 A Quick One From Dublin	2017.10 ≤ It's all relative ≥	
2015.06 In the wake of FOSDEM		2017.11 Tidy Da Tags	
	2016.17 Making our Introductions	2017.12 How To Race A Hyper	
2015.07 – I like trains! Fast trains, that is		2017.13 IO's not the same	
2015.08 - A Release, a Star and still pic	2016.19 Summer Strikes		
2015.09: Highlights of the Week, and als		2017.14 The IO Front Advances	
and the same and the same and the same and the same and			

2017.15 Kaboom! (1) 2017.16 IO Hits The Road **2017.17 Interesting Times** 2017.18 Starlight, Starbright 2017.19 Albatross_I 2017.20 Cross g Te Aps 2017.21 \ 6B 2017 2 J. Handle Encoding 2 7 22 Fulfilled TAP 7.24 Synchronicity Sorted 2017.25 [*] @perl-6-books 2017.26 Half Way There 2017.27 Inching On Speed 2017.28 Rakudo is Hot 2017.29 Zoffix Released 2017.30 Starring Fresh Produce 2017.31 Moar Smaller 2017.32 Weekly 101 2017.33 In Review 2017.34 Going

Anatomy of a Weekly

2017.34 Going

This week Rakudo Perl 6 went Atomic! Well, in the sense of "forming a single irreducible unit or component in a larger system".

Locking is one of the evils in multi-threaded programming: Rakudo Perl 6 now has several lock-free primitives for updating native integer variables from several threads simultaneously. They're all described on a <u>brand new documentation page</u>. In short, the new operators are:

- \$var
 \bigsize \text{\$\subseteq} \text{\$\subs
- my \$a = \begin{aligned}
 \text{Syar (aka my \$a = atomic-fetch(\$var))}
 \end{aligned}
 \]

Main article

Other main core points

AlexDaniel++ for his first release

Aleks-Daniel Jakimenko-Aleksejev has done his first Rakudo compiler release! This signals the end of an era in which *Zoffix Znet* did **14** consecutive Rakudo compiler releases. For which I can only give a big Thank You!

If you look at announcement for Rakudo Perl 6 2017.08, you will see quite a

Other core developments

- Samantha McVey fixed several issues with ignoremark and a number of edge cases when concatenating strings.
- Stefan Seifert fixed an issue with native closures failing on a second run. He

 also made sure that Pakudo Porl 6 will exit with a value of 6 if involved.

Events

Swiss Perl Workshop

The <u>schedule</u> of the <u>Swiss Perl Workshop</u> has been published. It contains the following Perl 6 related presentations (in chronological order):

• Three Little Words by Damian Conway.

TPCiA Followup

Unfortunately, the official videos of <u>TPCiA</u> have not arrived yet. But we do have some pictures that have been shared:

Clauria Tarala (manada Franco Danala Innim)

Overview of (other) blog posts

Blog Posts

- My Perl Conference in Amsterdam Takeaway by Philipp Gortan.
- The emperor's new clothes by Nadim Khemir.
- Building Perl 6 Applications with Docker and Ducky by Alexey Melezhik.
- <u>Parsing nothing</u> by Wenzel P. P. Peppmeyer.
- Dronarations for wour by Wanzal D. D. Danner aug

The Meanwhiles

Meanwhile on Twitter

- <u>TPCiA Slides</u> by Samantha McVey.
- Heavy Metal TPF by Zoffix Znet.
- Thoughtful by Stephen Hall.

Meanwhile on StackOverflow

- Is there a canonical way to print a stack trace in Perl 6? by piojo.
- <u>Creating a Perl 6 module containing Perl 5 utility scripts in bin/</u> by Christopher Bottoms.
- I and functions into other namespaces by butqunit

Meanwhile on perl6-users

• How do I do SSL/TLS with eMail::MIME? by ToddAndMargo.

New Modules

Ecosystem Additions

- <u>Toaster</u> by *Zoffix Znet*.
- <u>Grammar::ErrorReporting</u> by *Moritz Lenz*.
- RPG::Base by Geoff Broadwell.
- App··P6Gha by Shoichi Kaii

Statistics: the first 3



A steady following develops

Statistics: the last 3



Que? What happened?

Sometimes a nerve is struck





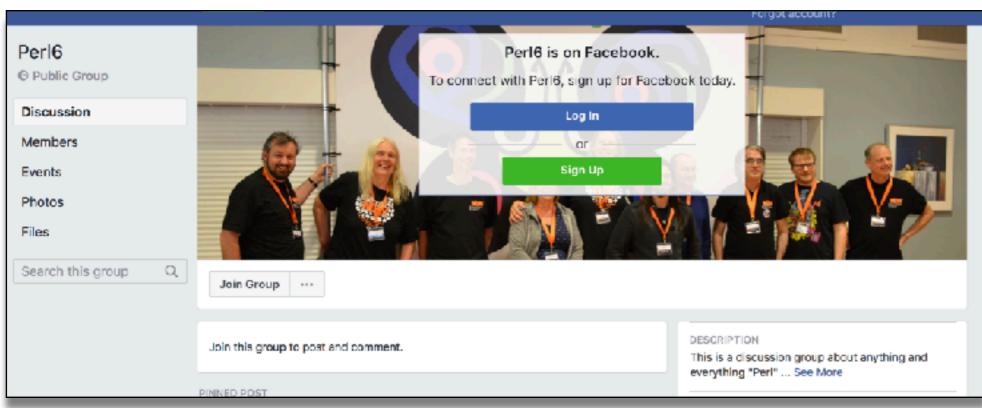


How can you help P6W?

- Do stuff.
- Blog about your stuff.
- Cannot blog (yet)?
 - Provide one paragraph summary of what you did.
 - By email, IRC, text, Telegram, *!
- Tell people about the Perl 6 Weekly!

Social Media







Thank You!

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Questions?

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