



APACHECON Europe, October 2019

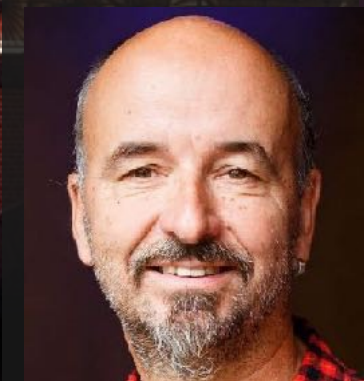
# Shared Neurons

The Secret Sauce  
of Open Source?

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images: Adobe Stock, unless otherwise specified  
slides revision 2019-10-22









If you want to go fast, go alone  
If you want to go far, go together  
(African proverb)



picture: myself

# Apache Cocoon's dev list, circa 2003...



From: Gianugo Rabellino <gianugo@apache.org>  
Subject: [RT] Sitemap inheritance (was: User Pipeline Customization)  
Date: 2003/10/24 16:49:50  
List: [dev@cocoon.apache.org](mailto:dev@cocoon.apache.org)

I'll take this lenya-dev post from Andreas as a starting point, since **this is a blatant case of "shared neurons"**: I was thinking about exactly the same things this morning on a conversation with Ricardo, and the more I think about it, the more I tend to realize that it would boost Cocoon productivity even more.

I have been quite uncomfortable at times with Cocoon management of large applications. I was unable to realize exactly why I had some alarms off scale, until a while ago, when I started thinking on how difficult is to reuse sitemap logic across applications.

What happens to me quite often is that I'm constantly doing c&p from sitemaps, trying to reuse existing snippets all over the place. This is of course the poorest man's reuse technique, something I learnt should be avoided at all costs.




It's like love songs...

# WHAT?

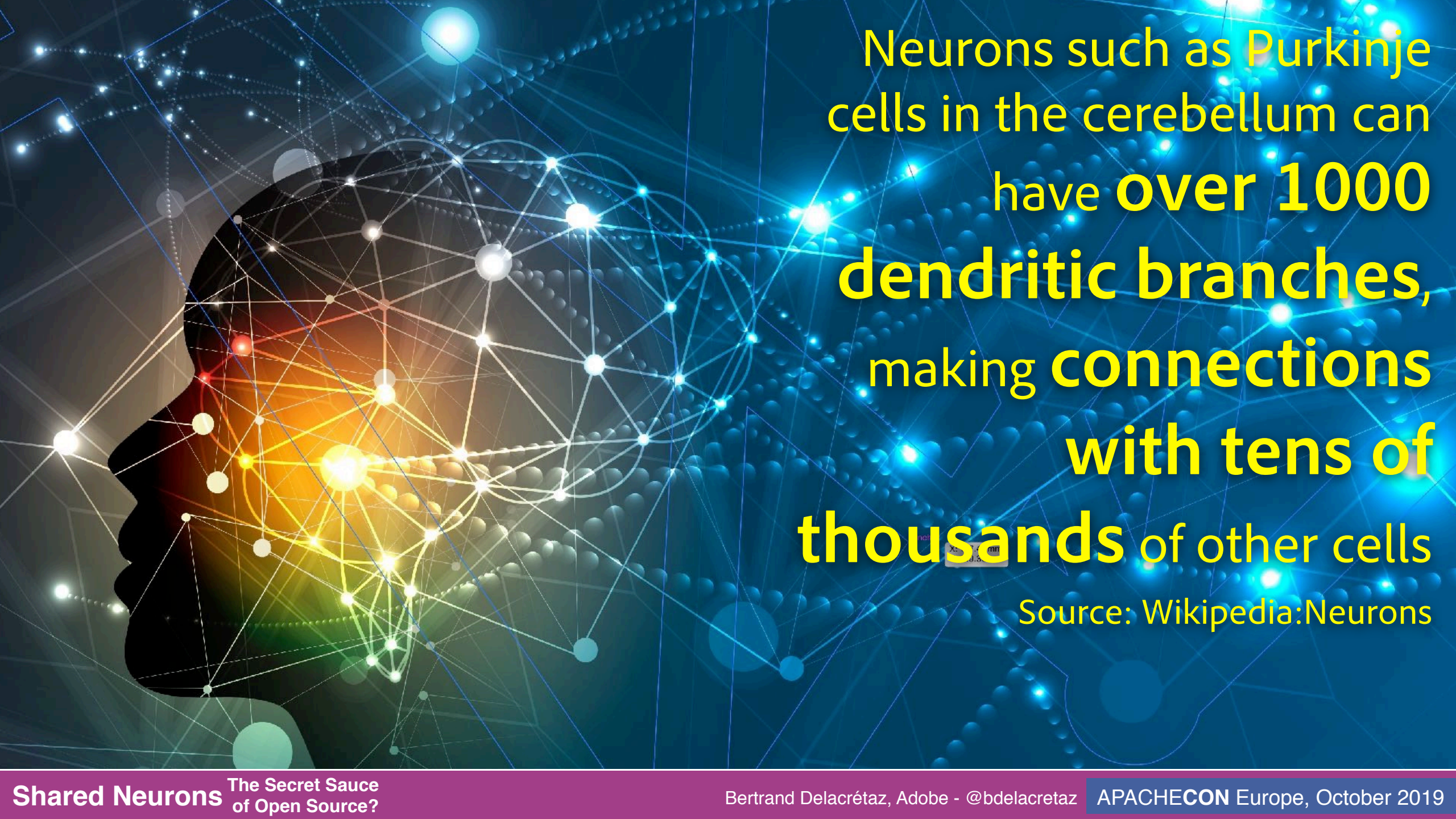






Many brains  
getting together  
to create  
a Greater Whole

X: 157.41 mm  
Y: 219.35 mm




Neurons such as Purkinje cells in the cerebellum can have **over 1000 dendritic branches**, making **connections with tens of thousands** of other cells

Source: Wikipedia:Neurons



anche  
X: 157.41 mm  
Y: 219.35 mm

It's about  
**COMMUNICATION**



Many brains  
getting together  
to create  
a Greater Whole

X: 157.41 mm  
Y: 219.35 mm

# REALLY?



# 90 days of "shared neurons" design: asynchronous, slow, iterative

**From:** davidb@apache.org  
**Subject:** Potential Felix contribution: ConfigAdmin plugin that can substitute variable placeholders (e.g. for K8s secrets)  
**Date:** 2019/06/11 12:30:41  
**List:** [dev@felix.apache.org](mailto:dev@felix.apache.org)

1

Hi all,

Some time ago I wrote a small bundle that provides a Configuration Admin plugin to substitute placeholders in configuration items with values obtained from the local file system. It was initially developed to obtain

**From:** Jean-Baptiste Onofré  
<jb@nanthrax.net>

2

Cool, I would be more than happy to work with you on this one !

Does it also support replacement with "system variables" (like `-Duser=my-user`) ?

I started a ConfigAdmin "hack" for Karaf about that, especially when running in Docker.

**From:** David Bosschaert  
<david.bosschaert@gmail.com>

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I have renamed the plugin to 'interpolation'.  
I have also implemented framework/system property based substitution as suggested by JB Onofré

**From:** Bertrand Delacretaz  
<bdelacretaz@apache.org>

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FWIW, "interpolation" is a common term for that as per [https://en.wikipedia.org/wiki/String\\_interpolation](https://en.wikipedia.org/wiki/String_interpolation)

**From:** Georg Henzler <ghenzler@apache.org>

\* I'm not sure if `${env:name}` is the best syntax... I suppose you chose that over curly braces to not clash with potential other replacement mechanisms downstream. But `$[]` looks fairly similar to `${}`, maybe something like `%env:name%`, `{env:name}` or `#{env:name}` would make it visually clearer that it is not a `${}` replacement.

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**From:** Carsten Ziegeler  
<cziegeler@apache.org>

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Ok, I see. Yes, makes sense. I think we should leave the reference in no value is found and probably provide an exclude (regex) option. This way, if you run into the trouble you mention above, you can configure the exclude option. But in general you don't have to

<https://s.apache.org/shared-neurons-example>

# A counter-example...



1817:  
velocipede



1870:  
high wheeler



1886:  
safety bicycle



2019:  
Cipollini NK1K, 1050 g frame

**+53 years +15 years**

Images: Wikimedia Commons + [www.mcipollini.com](http://www.mcipollini.com)

# HOW?

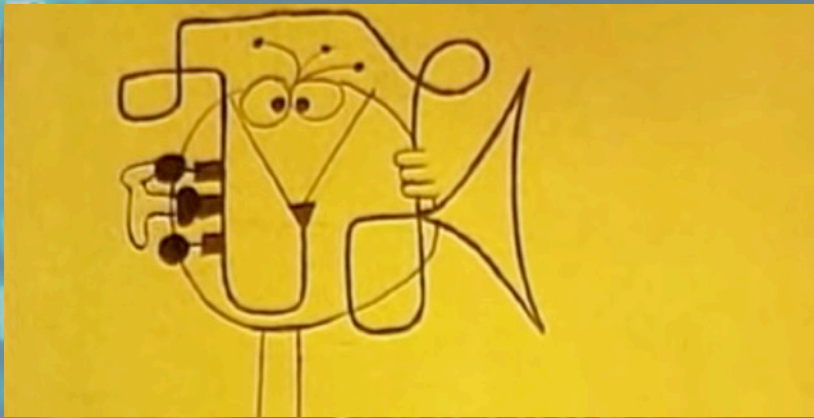




# Neurons Talk a Lot!

...in focused conversations





# It's about communication



# Constant Flow



# Talk to the Project



Share early, Share often



"The more we fail,  
the more likely we  
are to eventually  
succeed"

*Prof. Shadoko,  
Les Shadoks  
(French TV, 1968)*

**Allow mistakes**

source: <https://www.ina.fr/emissions/les-shadoks/>



```
return  
function use_uni  
for (var b = [], c  
    0 == use_array(a[c],  
    }  
    return b.length;  
}  
function count_array_gen() {  
    var a = 0, b = $("#User_logged")  
    inp_array = b.split(" ");  
    input_sum = inp_array.length;  
    for (var b = [], a = [], c =  
        0 == use_array(inp_array)  
    }  
    a = b;  
    input_words = a.length;  
    a.sort(dynamicSort("us  
    reverse());  
    indexOf_keyword  
    splice
```

# Code Speaks Louder



# Slow Discussions





## Usenet quoting

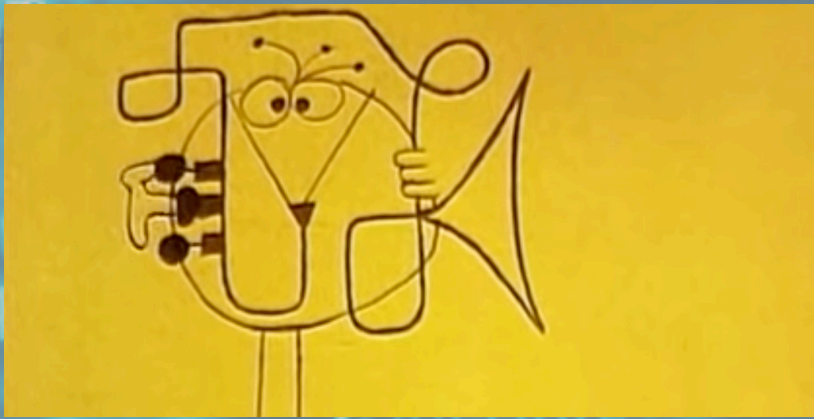
From Wikipedia, the free encyclopedia

### Examples [\[edit\]](#)

Usenet standard quoting refers to the practice of preceding the original message character at the beginning of each line, and then inserting one's responses inline.

```
> hello, how are you?  
I am fine
```

# Quote Precisely



# Shared Neurons?

# Many brains getting together to create a Greater Whole



Constant Flow - Talk to the Project - Share Early & Often - Allow Mistakes  
Code Speaks Louder - Slow Discussions - Quote Precisely