

# 4DMethod

*4D & Wakanda  
User Group*

July 20th, 2016



# Agenda

1. About 4DMethod
2. 4D News from Jim Sobczak, Brian Young
3. Wakanda News from Xiang Liu
4. The 4D iNUG E-Digest - Ed Hammond
5. What's to know in the Knowledgebase - Brent Raymond
6. 'Find in sorted array' vs 'Find in array' comparison
7. Special topic: Code Analysis Component, Dani Beaubien
8. General Q & A
9. Next Meeting - August 31, 2016 - You?
10. Wrap up

# Welcome



## Brent Raymond

4DMethod 4D & Wakanda User Group

[4dmethod.com](http://4dmethod.com)

[4dmethod@gmail.com](mailto:4dmethod@gmail.com)

# 4DMethod

## 4D & Wakanda User Group

- Combine efforts with other user groups around the world
- Bring together a scattered community of developers and users
- Stream meetings via Google Hangouts to allow people to participate in a live meeting from anywhere
- Record meetings and presentations to be viewed again or shared with others
- Provide fresh new content and exposure to all of the regional groups

# Moment for victims in Nice



# Remembering Brendan Coveney



General Manager  
(2000-2011)  
4D, Inc.



# 4D News

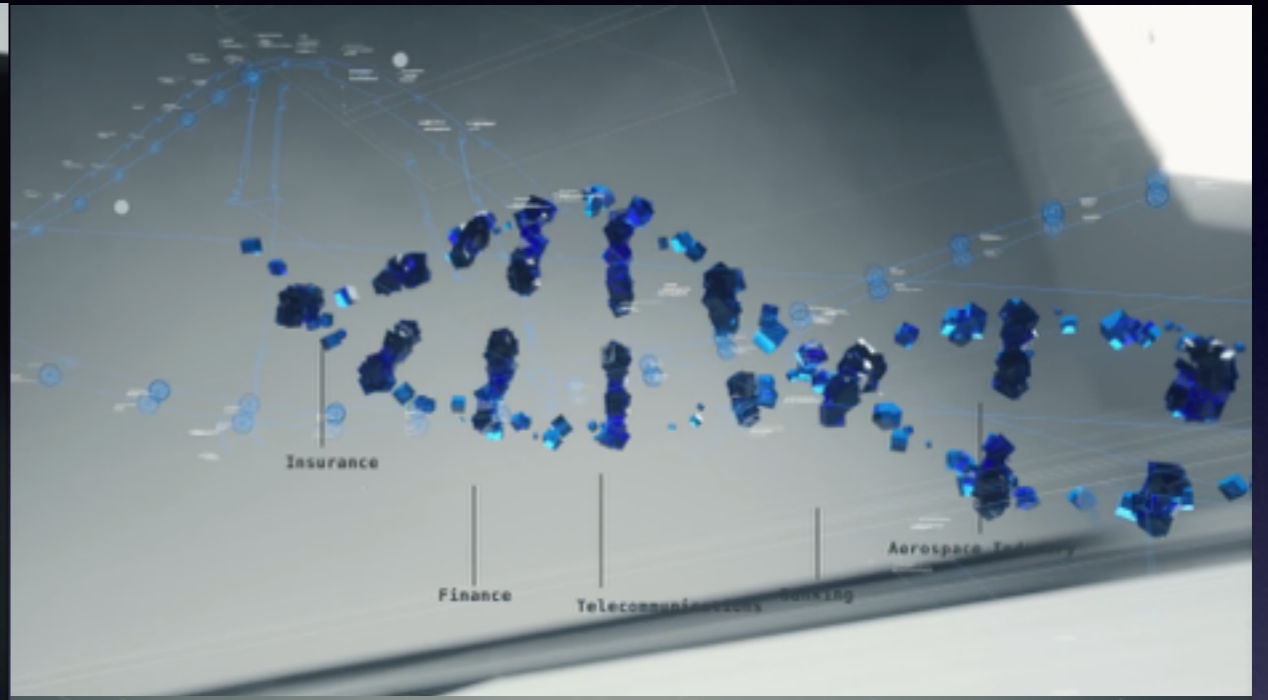
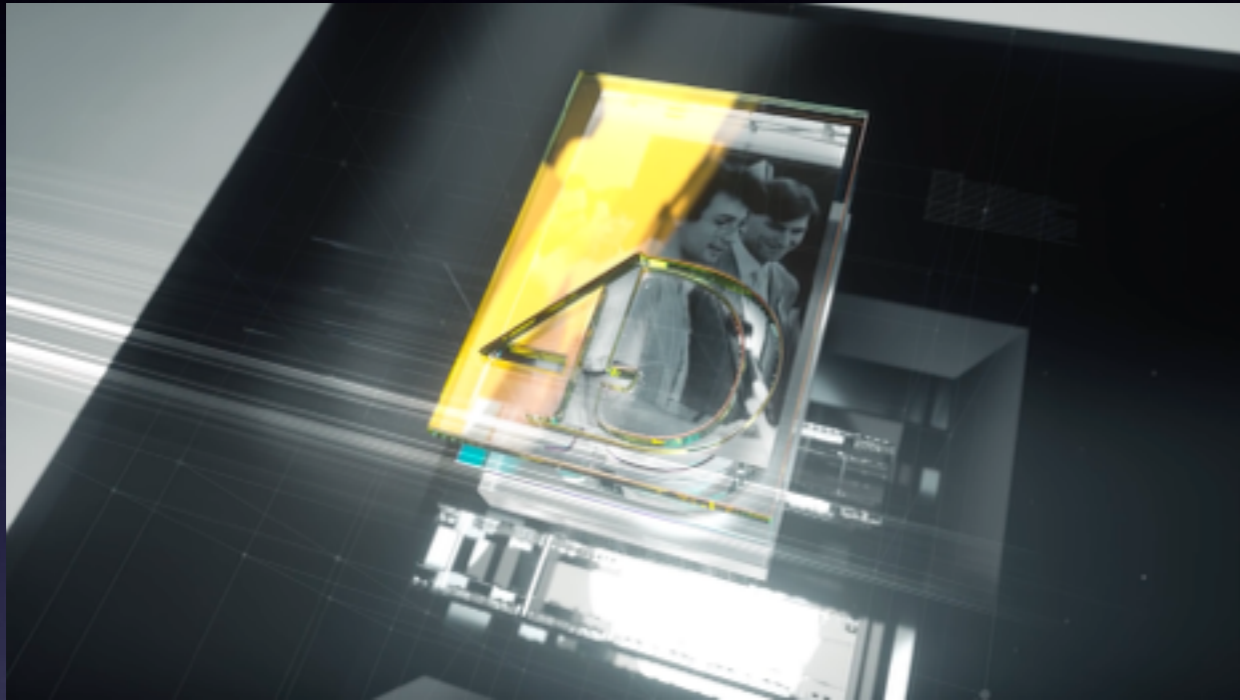


Jim Sobczak

VP of Sales & Services for 4D, Inc.  
OEM Manager

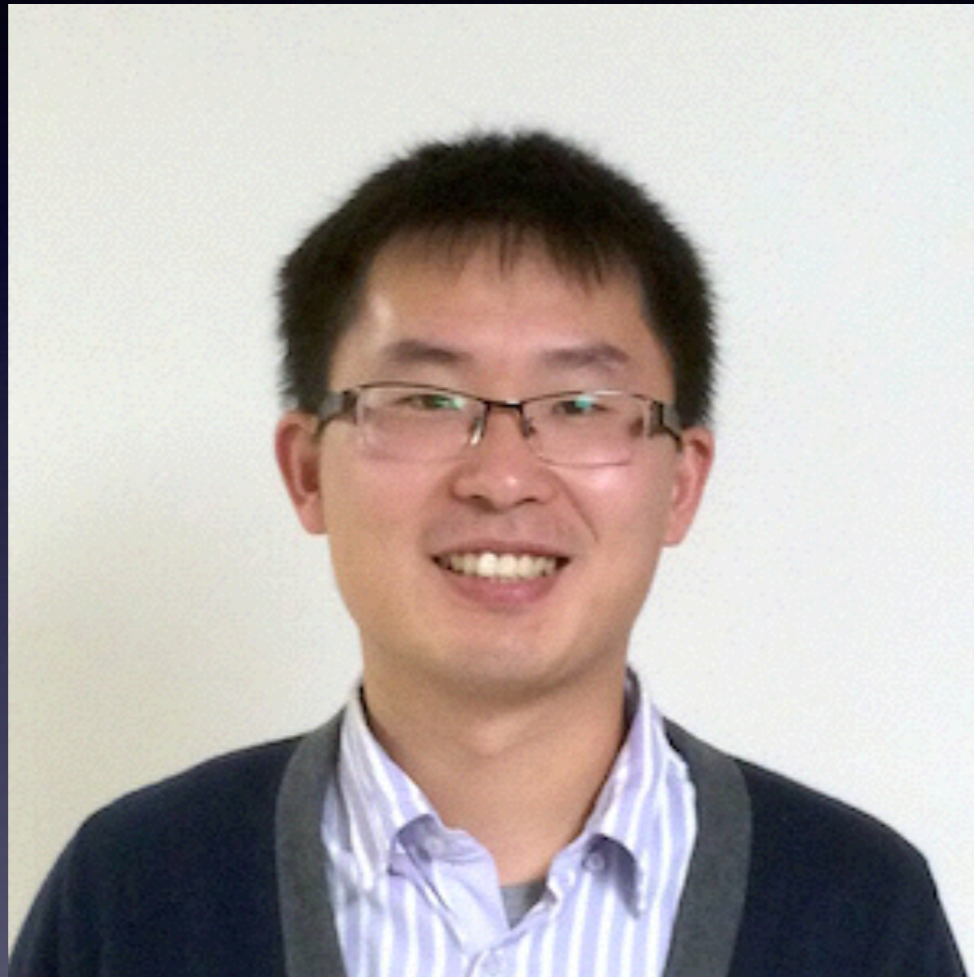
[jsobczak@4d.com](mailto:jsobczak@4d.com)

# 4D Promotional Video





# Wakanda News



Xiang Liu

Technical Services  
Engineer

4D Inc

[XLiu@4d.com](mailto:XLiu@4d.com)

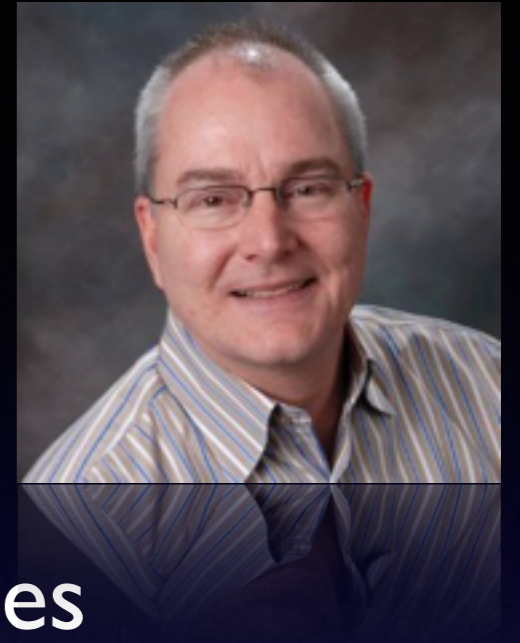
[https://www.linkedin.com/in/  
xiang-liu-05683232](https://www.linkedin.com/in/xiang-liu-05683232)



wakanda

# The 4D iNUG E-Digest

## Ed Hammond



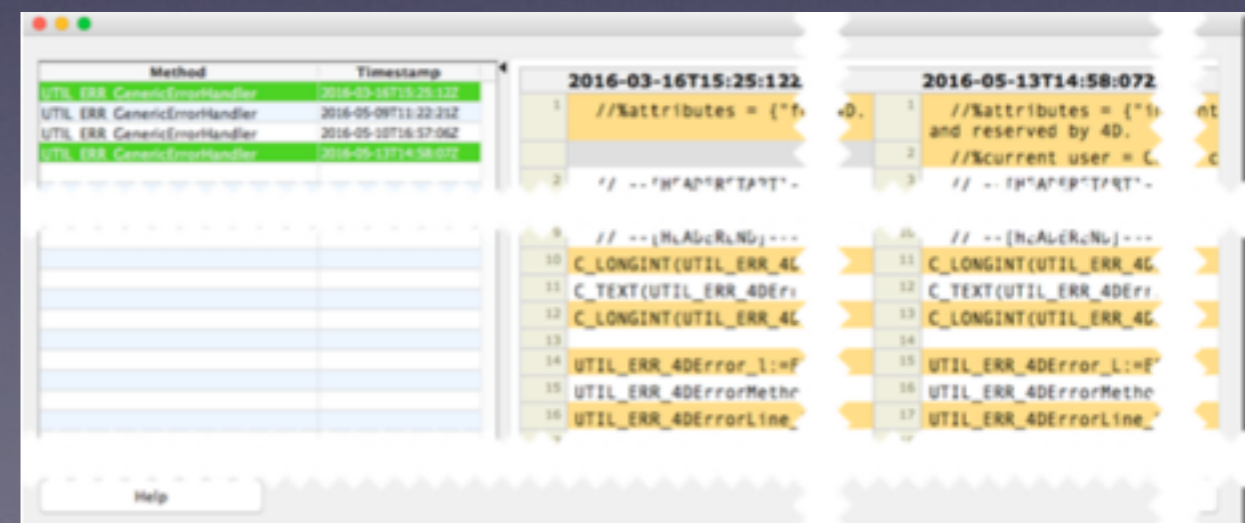
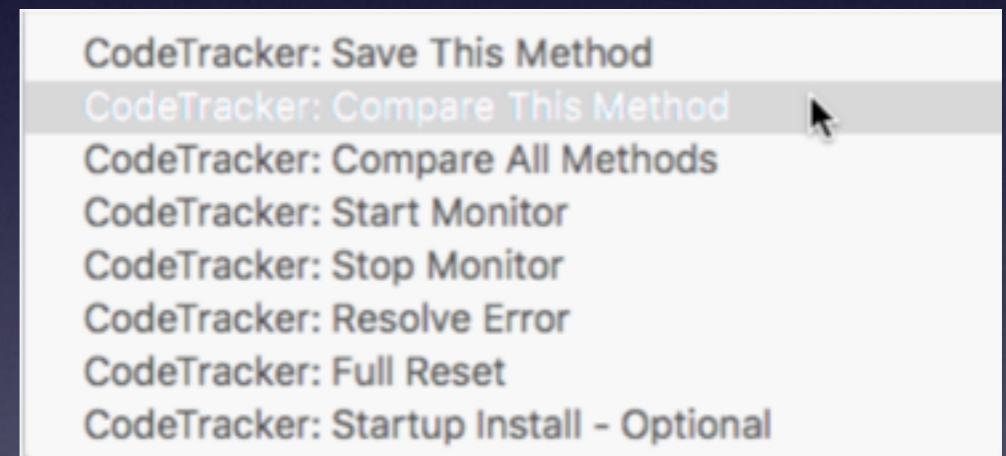
- Wide breadth of topics and 4D tech issues
- Take advantage of a wealth of 4D experience and knowledge
- Check out <http://4dmethod.com/e-digests/> for a list of recent topics being discussed in the iNUG
- To register:  
<http://lists.4d.com/mailman/listinfo>
- All discussion accessible online at:  
<http://4d.1045681.n5.nabble.com>

# What's to know in the Knowledgebase?

- 4D Summit 2016...
- 4D Summit Europe...

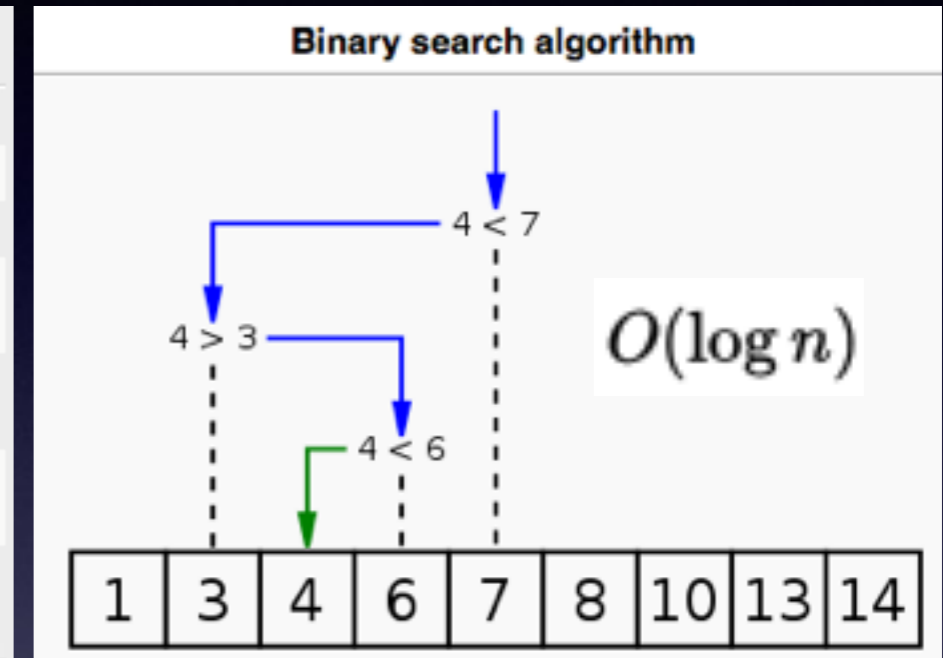
- CodeTracker Component

<http://kb.4d.com/assetid=77572>




# 'Find in array' vs 'Find in sorted array'

Find in sorted array ( array ; value ; > or < {; posFirst {; posLast} } ) -> Function result		
Parameter	Type	Description
array	Array	→ Array to search
value	Expression	→ Value (same type as array) to search for in the array
> or <	Operator	→ > if array is sorted in ascending order, < if it is sorted in descending order
posFirst	Longint	← Position of its first occurrence if the value is found; otherwise position where the value should be inserted
posLast	Longint	← Position of its last occurrence if the value is found; otherwise same as posFirst
Function result	Boolean	↻ True if at least one element in array matches the value, False otherwise



Alert



**Iterations: 500,000**  
**Result: Passed**

'Find in array' time: 38,320 milliseconds  
 'Find in sorted array' time: 2,273 milliseconds

**Saved time (seconds): 36.05**  
**% less time: 94.07**  
**# times as fast as 'Find in array': 16.86**

OK

**Special Topic:  
Code Analysis Component**

**Dani Beaubien**

**Principal**

**Open Road Development Inc.**

**Business Analyst**

**Alberta Ministry of Education**

<https://ca.linkedin.com/in/dani-beaubien-8b36b48>

## Code Analysis Component v1.8.1 Released May 2, 2016

A 4D v14/v15 Component targeted to 4D developers to do analysis on their 4D Code. The component provides the ability to export all the methods in the host database as text files, export all the methods as HTML documentation, and provide statistics on each of the methods.

The component has been released for 4D v14 and 4D v15, **free of charge**, to the 4D Community. [Download Now](#)

## Code Analysis Component for 4D v12 or 13

Only a subset of the features are supported based on when active development for of the component for those versions of 4D was stopped.

The component has been released, **free of charge**, to the 4D Community. [Download Now](#)

### Source Code Control Support

As of Release 1.4 of the component, the exported methods are source code control friendly. The end-of-line characters default to the norms for the platform (LF on Mac OS X, CRLF on Windows). This can be customized using preferences as well you can customize the name of the folder that the code is exported to including the ability to append just the current date, current date and time or append nothing.

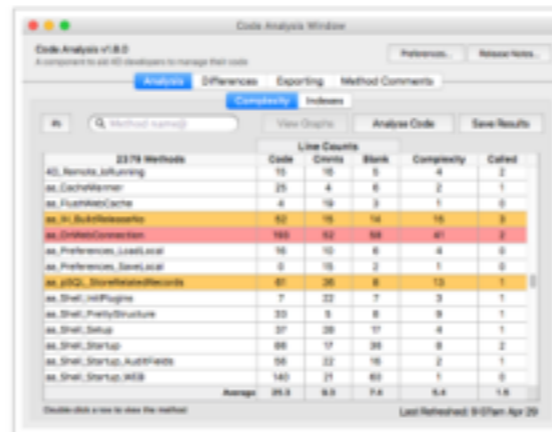
Future versions of the component will have increasing support for managing the methods that go into a folder that is linked with source control.

All the properties that 4D has provided a getter for are included in the exported JSON files.

### Perform Method Code Analysis

The component performs basic code analysis on every project method, project form method, table form method, database method and trigger method in the structure.

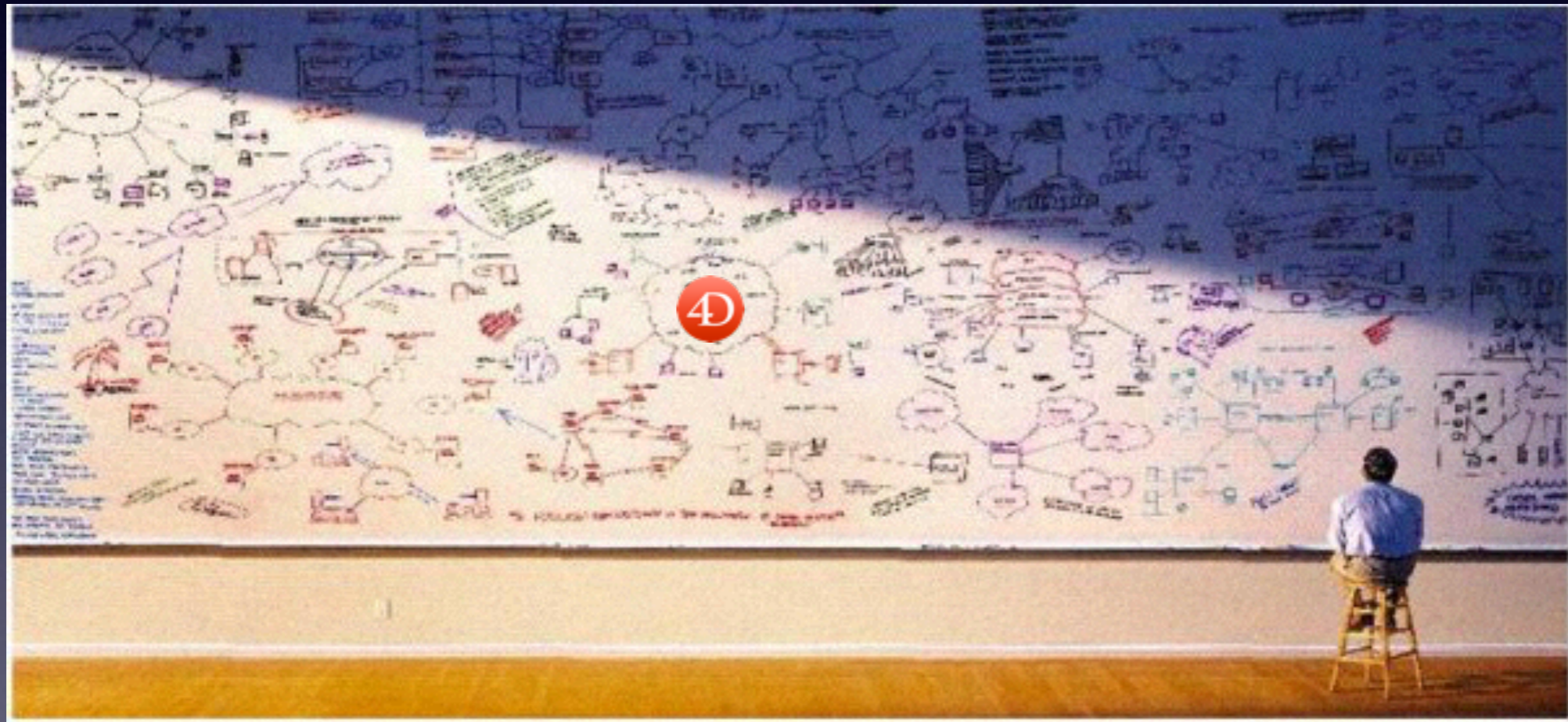
From this tab, the user can see some basic statistics for each method including **cyclomatic complexity**. The results of the analysis can be saved for future usage. The thresholds for the cyclomatic complexity and other parameters are modifiable and stored in the component's preferences.



Method Name	Code	Lines	Blank	Complexity	Called
4D.Remote_Monitoring	15	15	5	4	2
as.CacheWormer	25	4	6	2	1
as.FlushWebCache	4	19	3	1	0
as.InBulkReleaseInfo	52	15	14	15	3
as.LinkWebConnection	155	52	59	47	2
as.Preferences_LoadLocal	16	10	6	4	0
as.Preferences_SaveLocal	0	15	2	1	0
as.pSQL_StoreFormRecords	47	26	6	13	1
as.Shell_WebPuglia	7	22	7	3	1
as.Shell_PrettyStructure	23	5	8	9	1
as.Shell_Setup	37	26	17	4	1
as.Shell_Startup	66	17	26	9	2
as.Shell_Startup_AuditFields	56	22	16	2	1
as.Shell_Startup_MIS	140	21	61	1	0
Average	24.3	8.3	7.4	6.4	1.6



# Questions?



# Next Meeting



<http://4dmethod.com/schedule/>



# Next Meeting

Calling for speakers who would like to demo some of their work or applications. Open dates include:

August 31st, 2016, 12:00 noon, CST (UTC-6:00)

October 12th, 2016, 12:00 noon, CST (UTC-6:00)

December 7th, 2016, 12:00 noon, CST (UTC-6:00)

Let's see some more Wakanda!

# Wrap Up

Other questions?

Discussion

Feedback is appreciated