



CHOOSING THE RIGHT TOOLS FOR AUTOMATED UI TESTING

October 12, 2016



Relax, we'll help you!

AGENDA

WHO ARE WE

OUR
Story

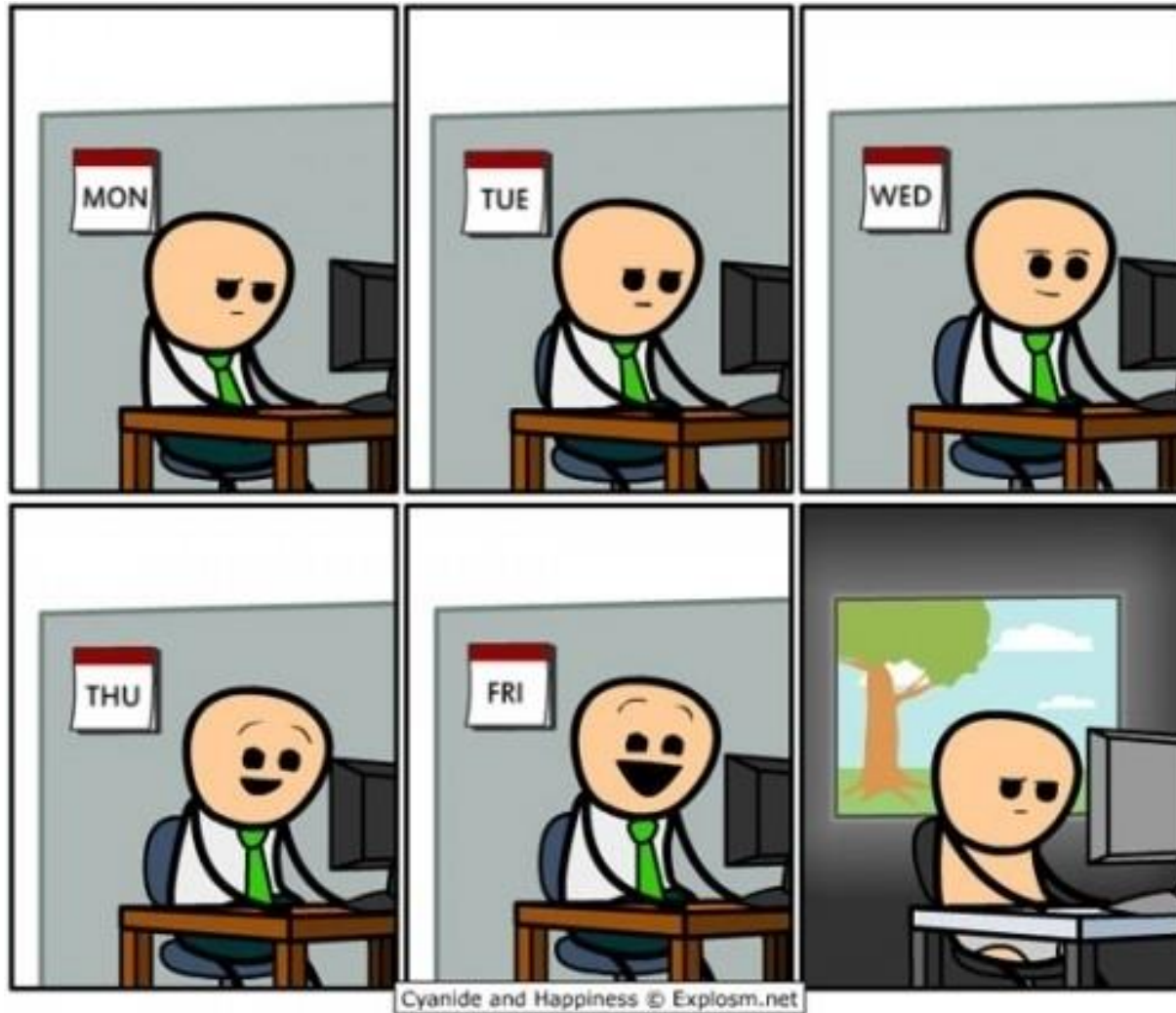
Tools

Lessons
LEARNED



Relax, we'll help you.

I'M ROLANDS - DEVELOPER



Relax, we'll help you.



Biggest insurance company in Scandinavia

Competence centres & teams
Agile, Scrum, Kanban
Web, desktop and mobile development
Internal test center
Manual and automated testing

600 IT employees in If
150 IT employees in If Baltic
130 IT employees in Riga

LETS IMAGINE..



Relax, we'll help you.

A FAMILY...



Relax, we'll help you.

AND THEN ...



Relax, we'll help you.

NO NEW CLOTHES!



Relax, we'll help you.

2 OLDEST SISTERS



Relax, we'll help you.

YOUNGEST SISTER



Relax, we'll help you.

AUTOMATED UI TESTING IN IF

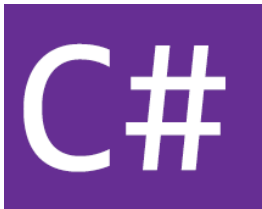


=



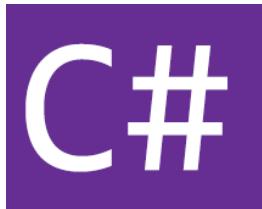
Relax, we'll help you.

TECHNOLOGY TRIBES



Relax, we'll help you.

TECHNOLOGY TRIBES



Relax, we'll help you.

SPECFLOW FOR ANGULAR



Relax, we'll help you.



Relax, we'll help you.

TECHNOLOGY COMPARISON (AS OF YESTERDAY)

Aspect	Specflow	Protractor
License	Open source (paid support)	Open source
Programming language	C#	Javascript
Gherkin	By default	With plugins
Test providers	MSTest, NUnit, xUnit	Jasmine, Mocha, Chai
Documentation	Good	Good
Contributors	60	207
Watchers	124	404
Stars	910	5913
Forks	434	1372
Last commit	22 days ago	11 hours ago
StackOverflow tags	990	5047



SPECFLOW EXAMPLE



@Bedrift

Scenario Outline: Navigation dropdown in Bedrift can be opened and a link clicked

Given I have clicked on navigation button *Bedrift*

And I have clicked on navigation button *Bedrift*

And dropdown menu is visible

When I click on dropdown link *<link>*

Then page with url *<url>* is opened

Examples:

<i>link</i>	<i>url</i>	
Startside Bedrift	/bedrift	
Alarmtelefon	/bedrift/europeiske-alarmsentral/	



Relax, we'll help you.

SPECFLOW EXAMPLE

```
[Given("I have clicked on dropdown link (.*)")]
[When("I click on dropdown link (.*)")]
0 references | KRUIROL, 1 day ago | 1 author, 2 changes | 0 exceptions
public void ClickOnDropdownLink(string linkLabel)
{
    var navigationDropdown = new NavigationDropdown(ScenarioContext.Current.Get<IWebDriver>());

    navigationDropdown.ClickOnLink(linkLabel);
}
```

```
1 reference | KRUIROL, 1 day ago | 1 author, 2 changes | 0 exceptions
public void ClickOnLink(string linkLabel)
{
    var allLinks = Scope.FindElements(By.TagName("a"));
    var link = allLinks.FirstOrDefault(x => x.Text.Trim() == linkLabel);

    link.ClickAndWait(Wait.Until.PageLoaded);
}
```



Relax, we'll help you.

PROTRACTOR EXAMPLE

Notifier

- ☒ Lawyer
- ☐ Someone else

```
other.notifierSection.notifierType.select("Lawyer");
```

Do you claim compensation from trade unions liability?

- ☐ Yes ☐ No

```
expect (other.notifierSection.compensationClaimed.isTradeUnion.field.isDisplayed()).toBeTruthy();
```



Relax, we'll help you.

PROTRACTOR EXAMPLE

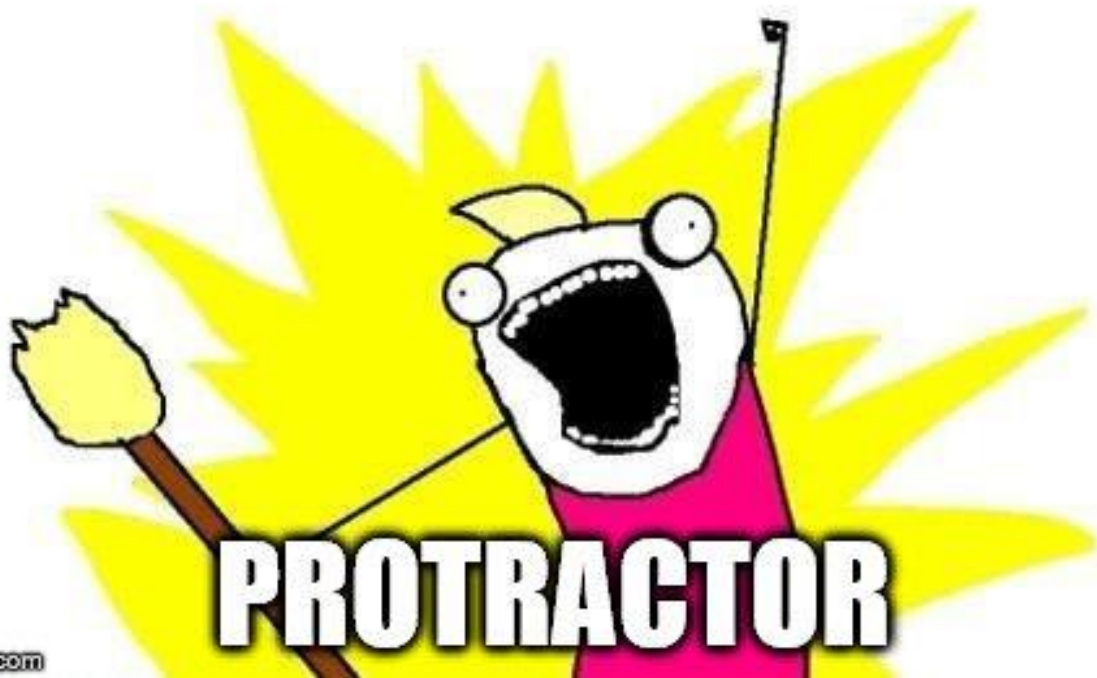
```
it('should show trade union question for other litigation in case of debt', function () {  
    legalExpenses.lossReportConcerns.select("Litigation");  
    legalExpenses.litigationOrPetitionConcerns.select("Other");  
    other.kindOfLitigation.select("Debt");  
    other.notifierSection.notifierType.select("Lawyer");  
    expect(other.notifierSection.compensationClaimed.isTradeUnion.field.isDisplayed()).toBeTruthy();  
});
```



Relax, we'll help you.

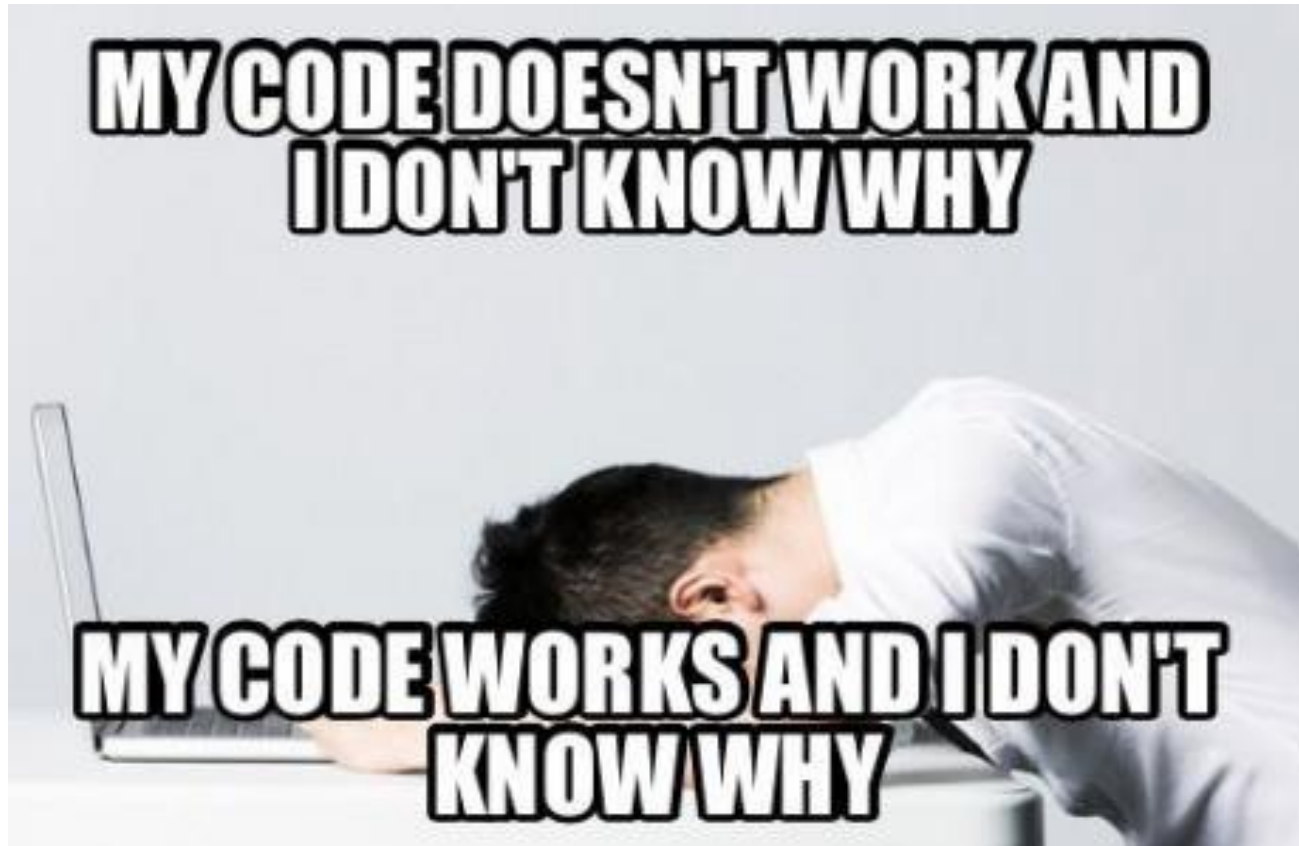
OUR DECISION

GO



Relax, we'll help you.

WHY THE HECK IT IS NOT WORKING BECAUSE IT MUST WORK



Relax, we'll help you.

RESULT

.NET developers implementing Protractor tests using TypeScript.



Relax, we'll help you.

LESSONS LEARNED

- Its not that easy to switch from C# to Javascript.
- SpecFlow and Protractor are just tools, main UI testing concepts (BDD, page object pattern) are the same and are applied to both of them.
- Team must be involved in making the decisions about tools and technologies used.



Relax, we'll help you.

OUR SUGGESTIONS

- Staying in the tribe – it is always the safest bet.
- Use TypeScript from the start (if you are using Protractor and you have people with Java/C# background).
- You have to be careful choosing open source third party libraries (consider community, Github stars, contributors, recent commits).
- There are other options out there – Protractor.NET, Gherkin for Jasmine, gazillion of different plugins, maybe something is suitable for you.



Relax, we'll help you.

Thank you!

If you want to know more about using Protractor, join the workshop at 14:00 😊



Relax, we'll help you.