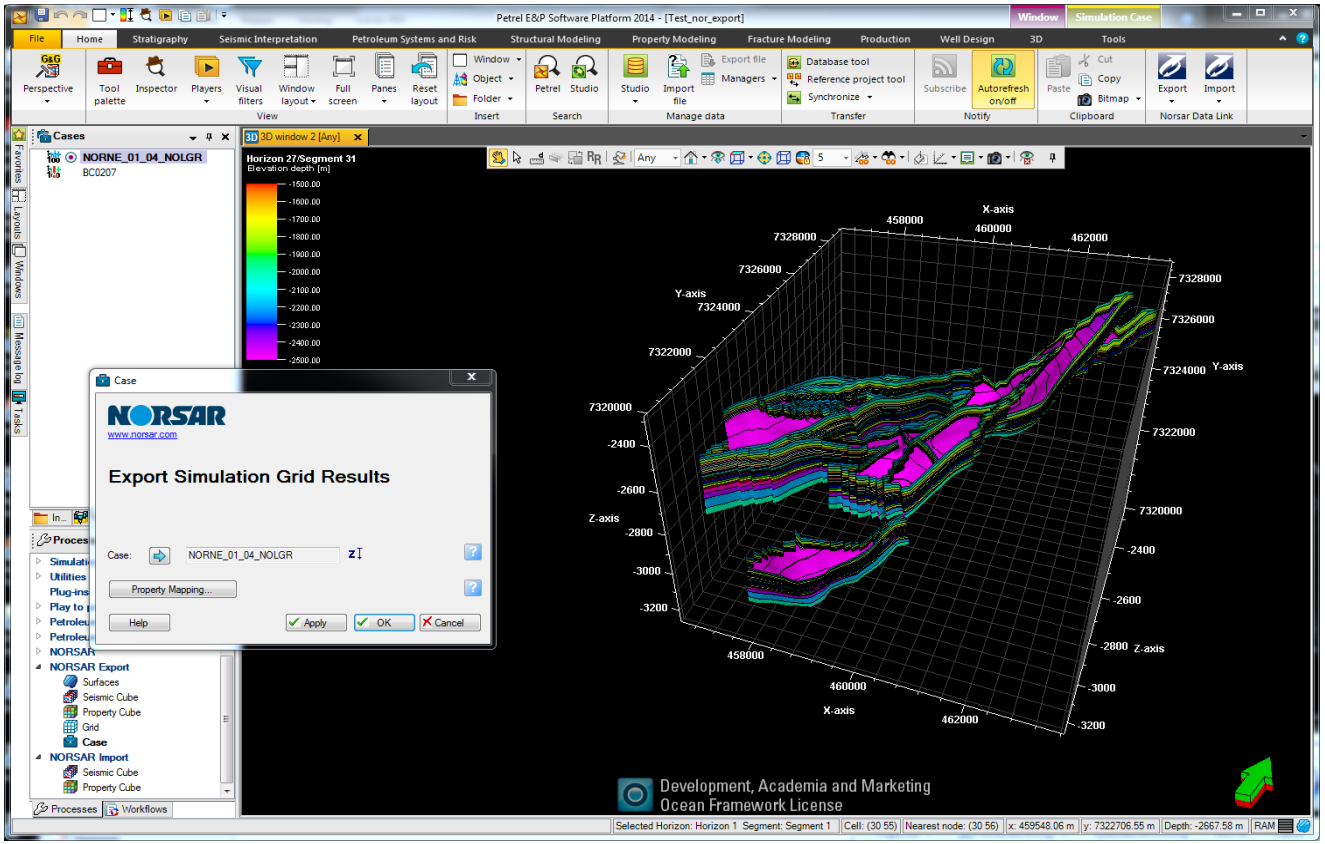
Comfyguration

Schlumberger

"What function(s) can be added to Configuration Designer to improve its usability?"

This is Petrel

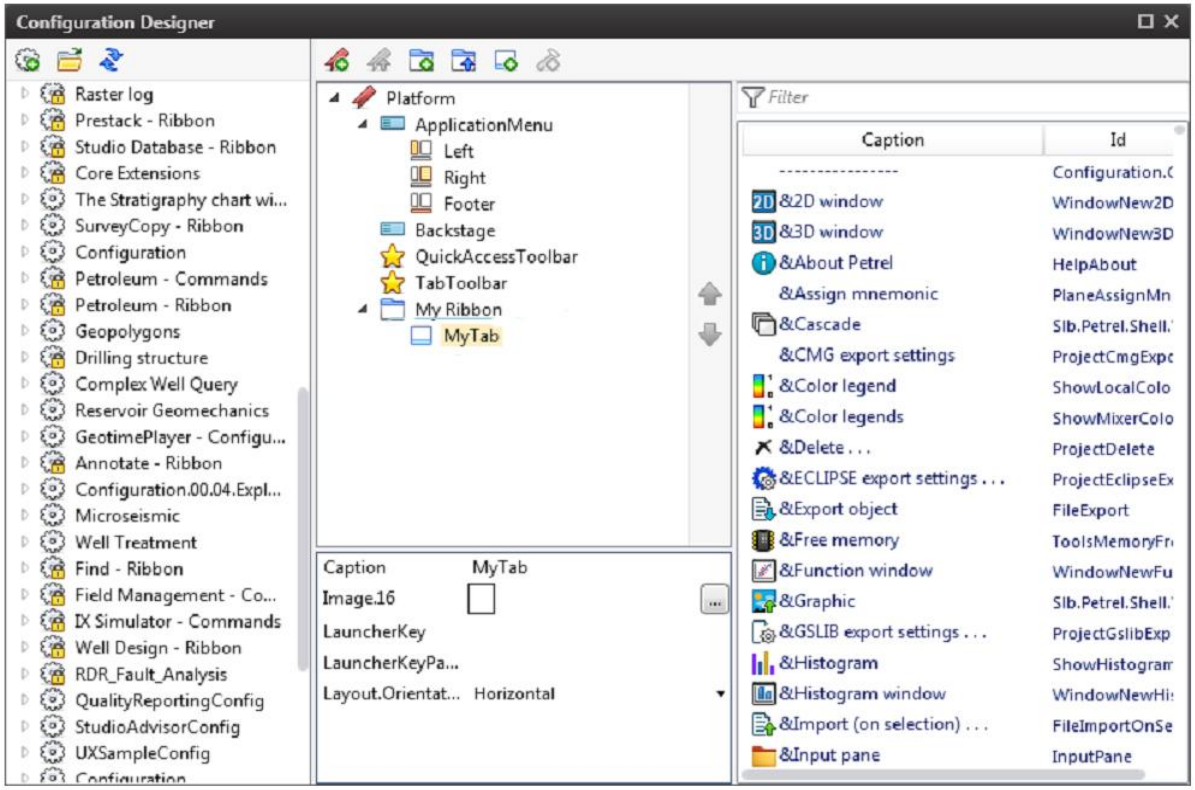
-Employees that work in the upstream sector at Schlumberger use a program called ‘Petrel’



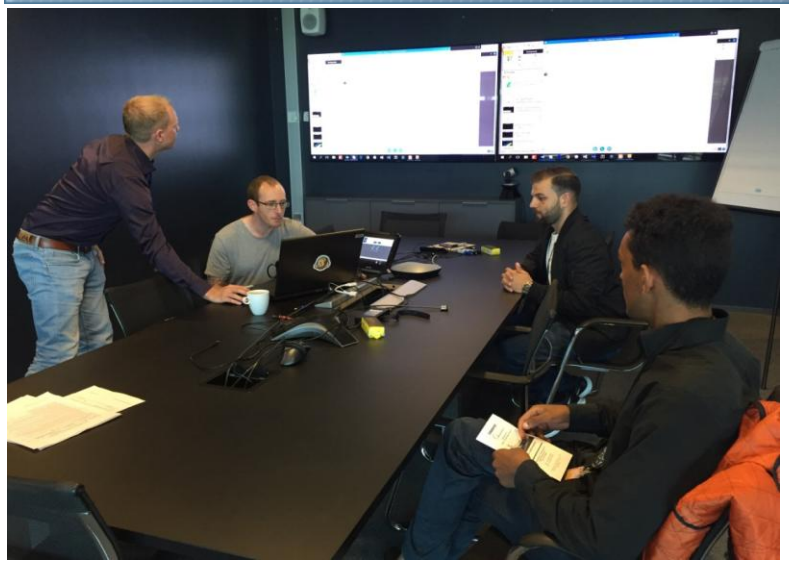
-Petrel offers different tools for different tasks in the upstream sector
For example oil well simulations, seismic data interpretation etc

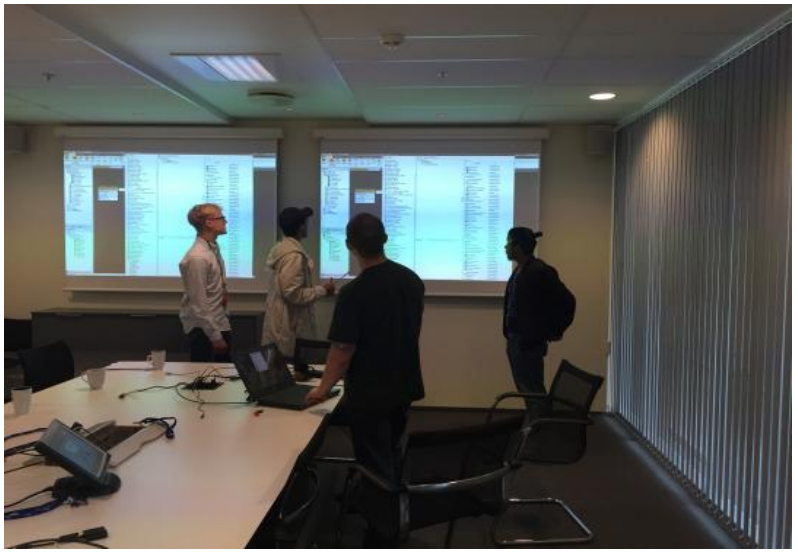
This is Configuration Designer

-Users of Petrel can use a plug-in tool called Configuration Designer to configure the GUI of Petrel



- By assigning commands (codes) to buttons (16x16 or 32x32 icons) , and arranging the buttons
- Not very advanced
- Used by developers and non-developers





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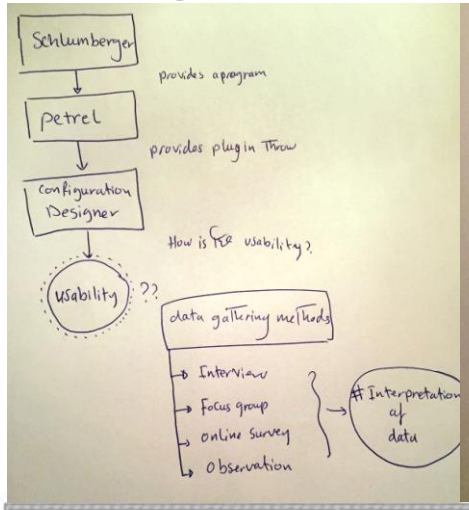

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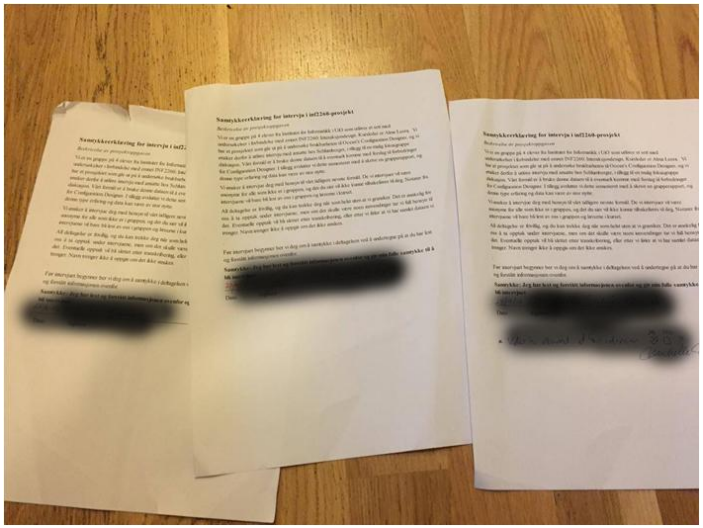
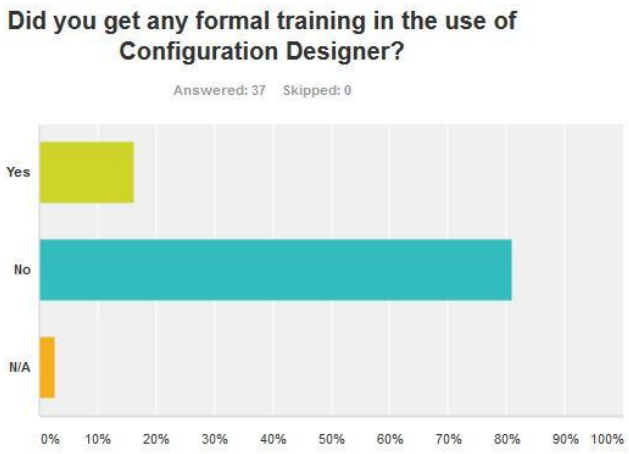


SurveyMonkey®



Gathering Data

-3 Interviews

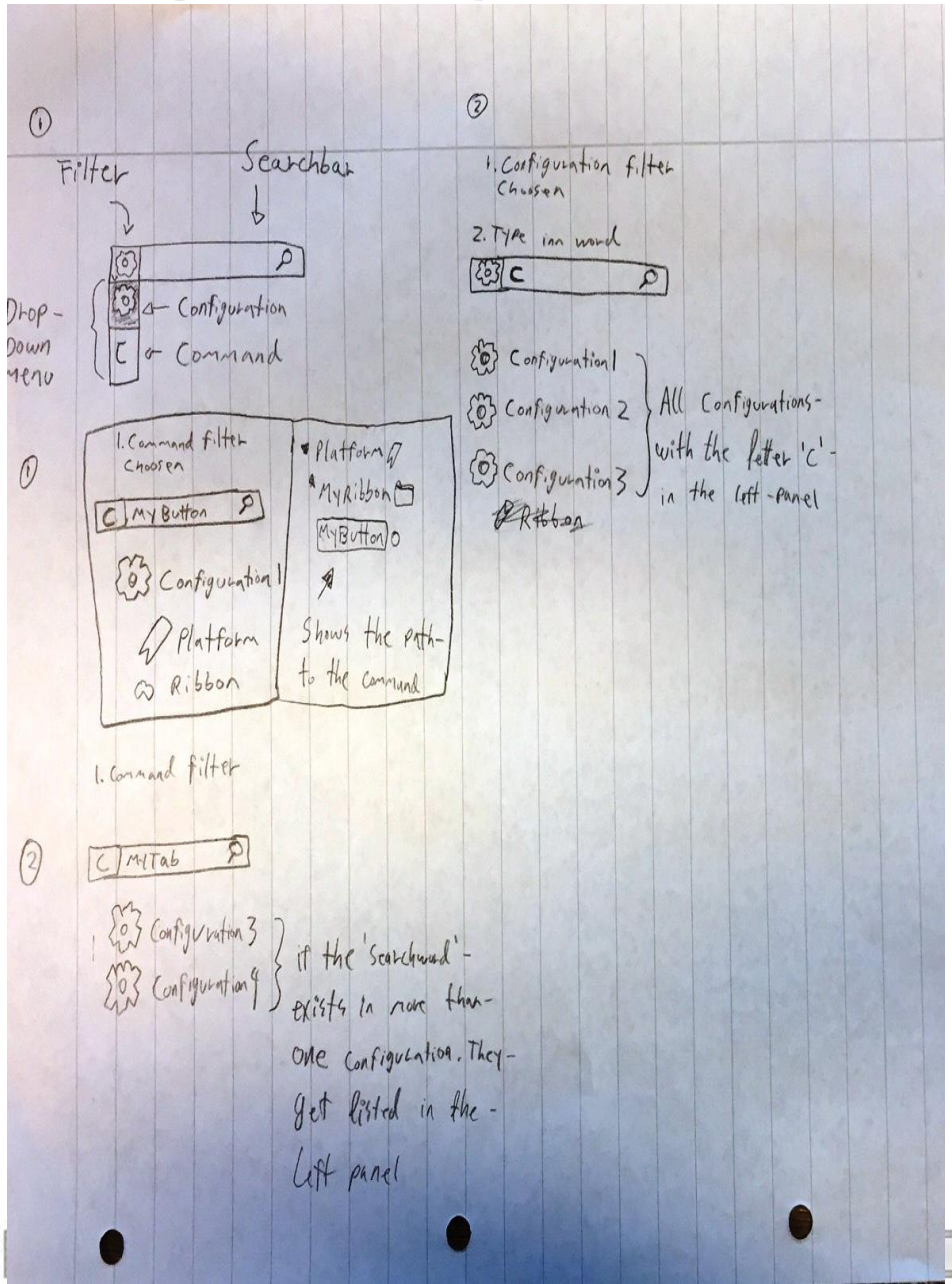
- -System architect
- -Experienced user
- -Intermidiate user

-1 Focus group

- -Product analyst
- -Quality Assurance tester
- -2 system engineers

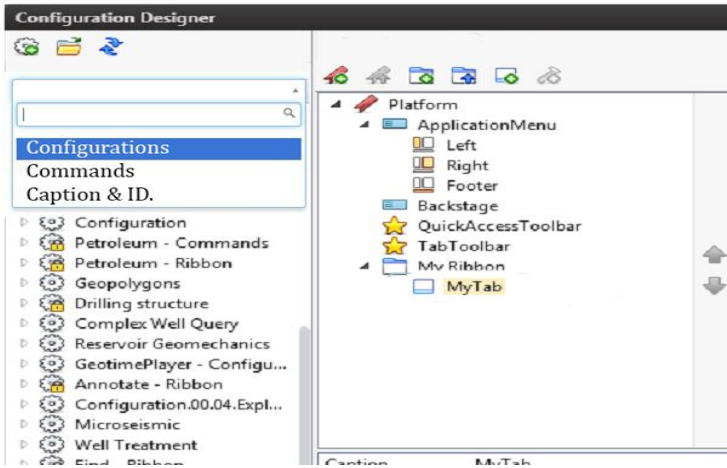
- Online survey

What function(s) can be added to Configuration Designer to improve its usability?

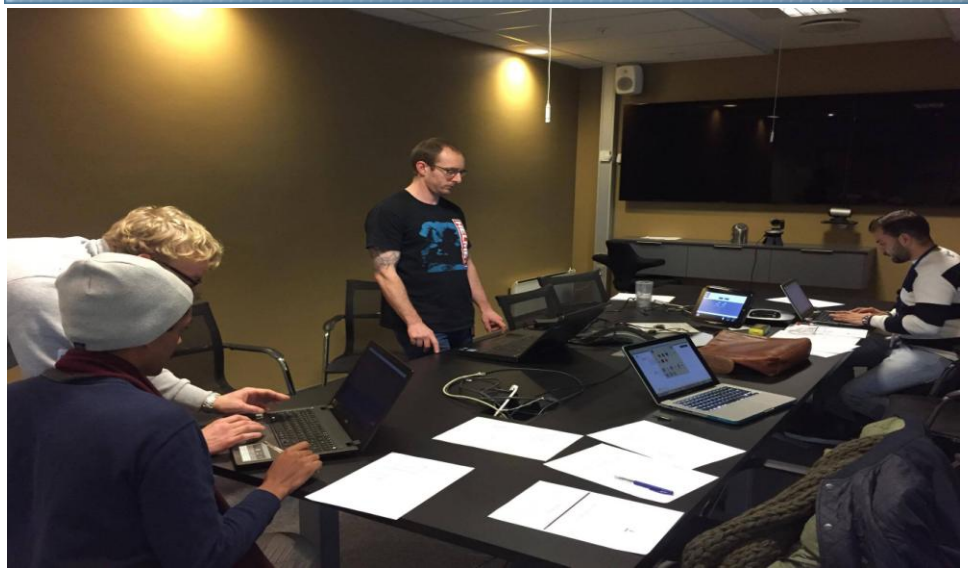


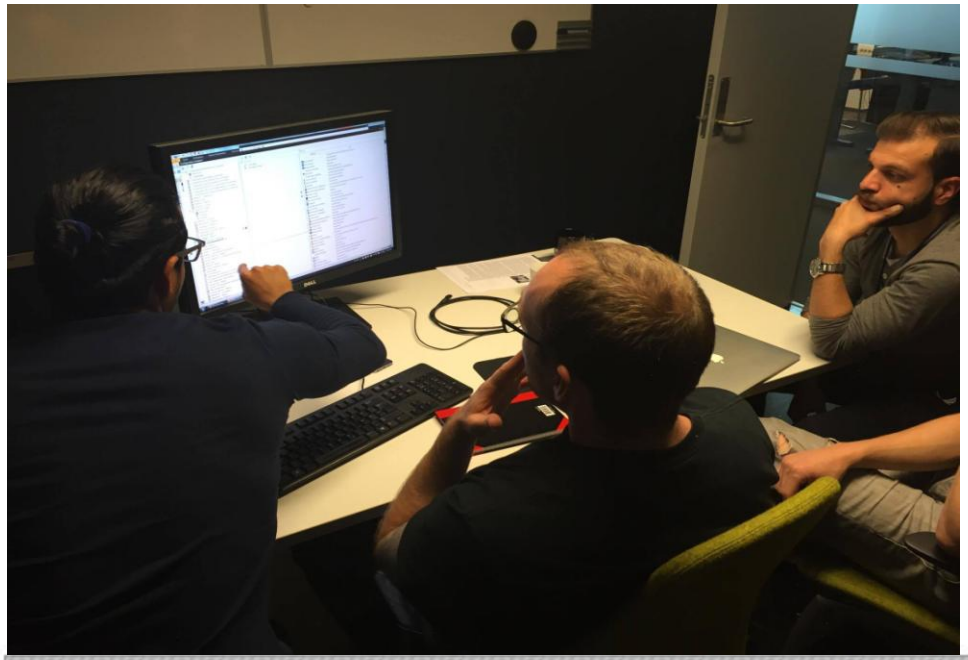
1- Search bar

That allows users tosearch among commands,configurations and captions



2- Help tab





Search bar.

Help tab was dropped

Schlumberger prefered The search bar .

-Covers more of the issues uncovered
-Practical for the company
-Majority demand

Building protptype !

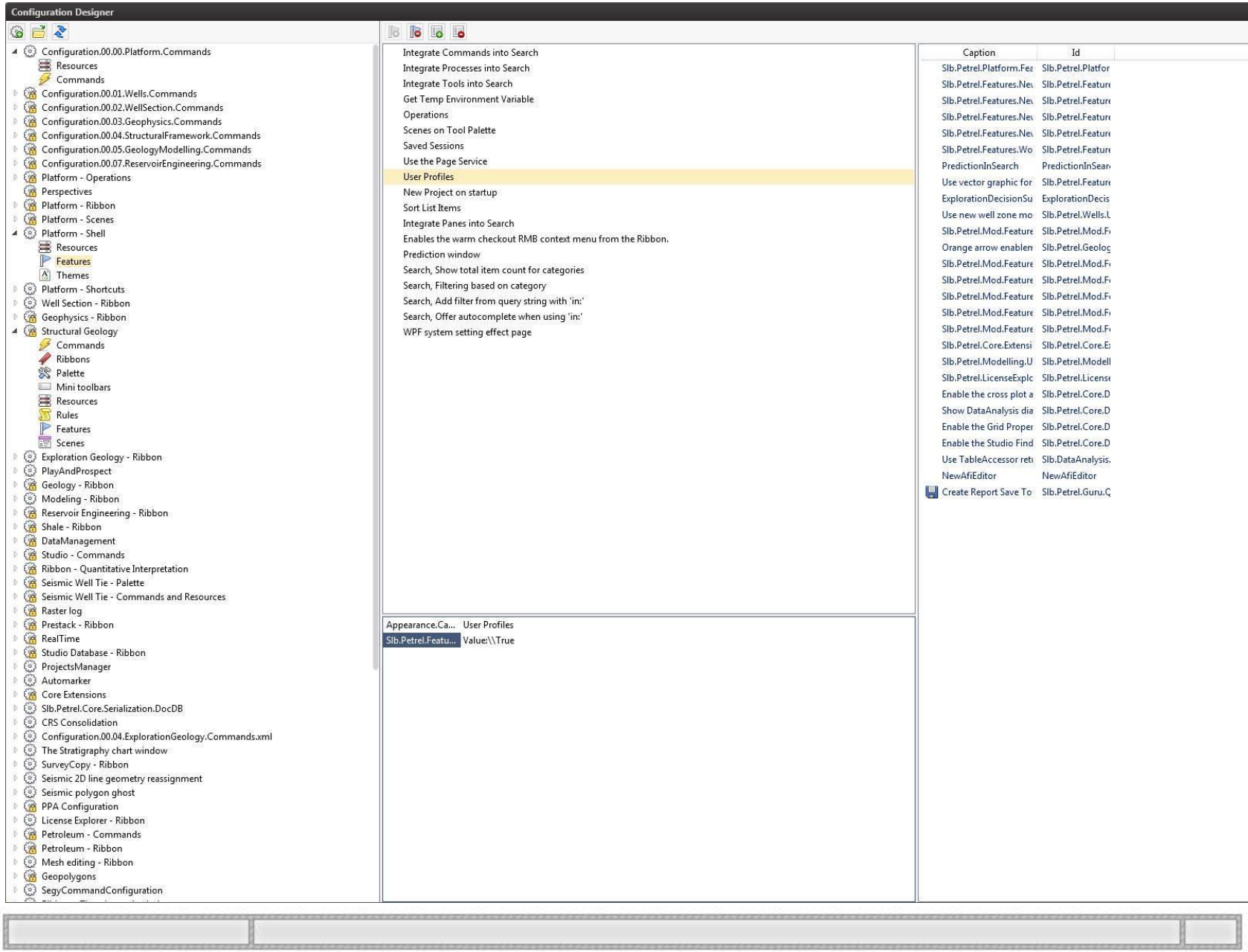
```
            else if {
                document.getElementById("check").classList.remove("showCheckBox");
            }
            if (!fantSok) {
                document.getElementById("configId").innerHTML = "Ingen match";
                document.getElementById("boks0").innerHTML = "";
                document.getElementById("check").classList.remove("showCheckBox");
            }
            fantSok = false;
        }
});
function showInfo(t) {
        tall = t[6];
        config = t;
        document.getElementById(t).classList.toggle("show");
        document.getElementById(tall).classList.toogle("highlight");
}

    // Close the dropdown if the user clicks outside of it
window.onclick = function(event) {
        if (!event.target.matches('.icon')) {
            var dropdowns = document.getElementsByClassName("dropdown-content");
            var hLt = document.getElementsByClassName("icon");
            for (i = 0; i < dropdowns.length; i++) {
                var oDp = dropdowns[i];
                var highL = hLt[i];
                if (oDp.classList.contains('show')) {
                    oDp.classList.remove('show');
                    highL.classList.remove('highlight');
                }
            }
        }
}
function fyllBoks(nr, indeks) {
        document.getElementById("configId").innerHTML = config;
```

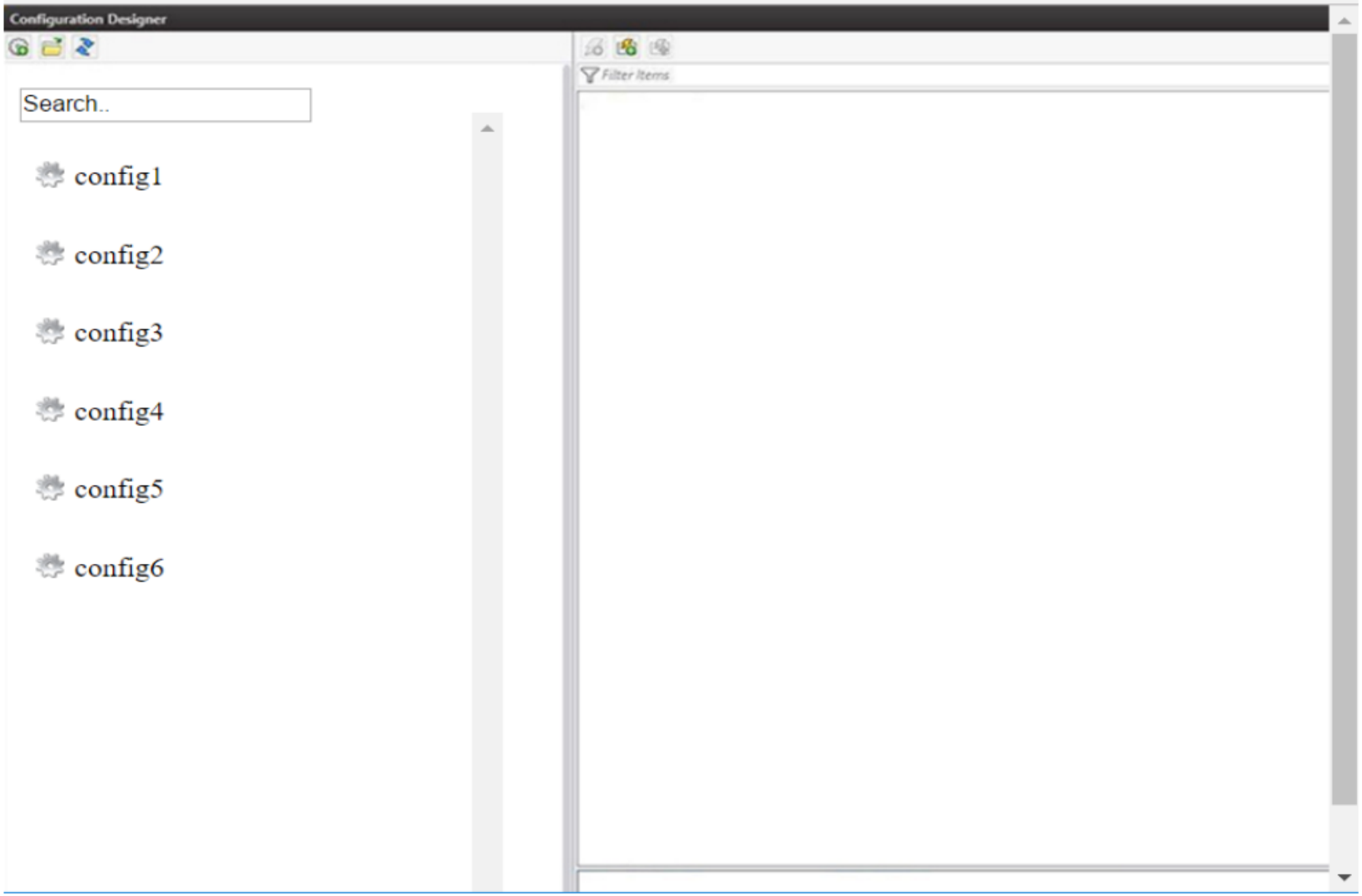
A program (simulator)

Based on
- Java scripts
- Html codes

Configuration Designer now

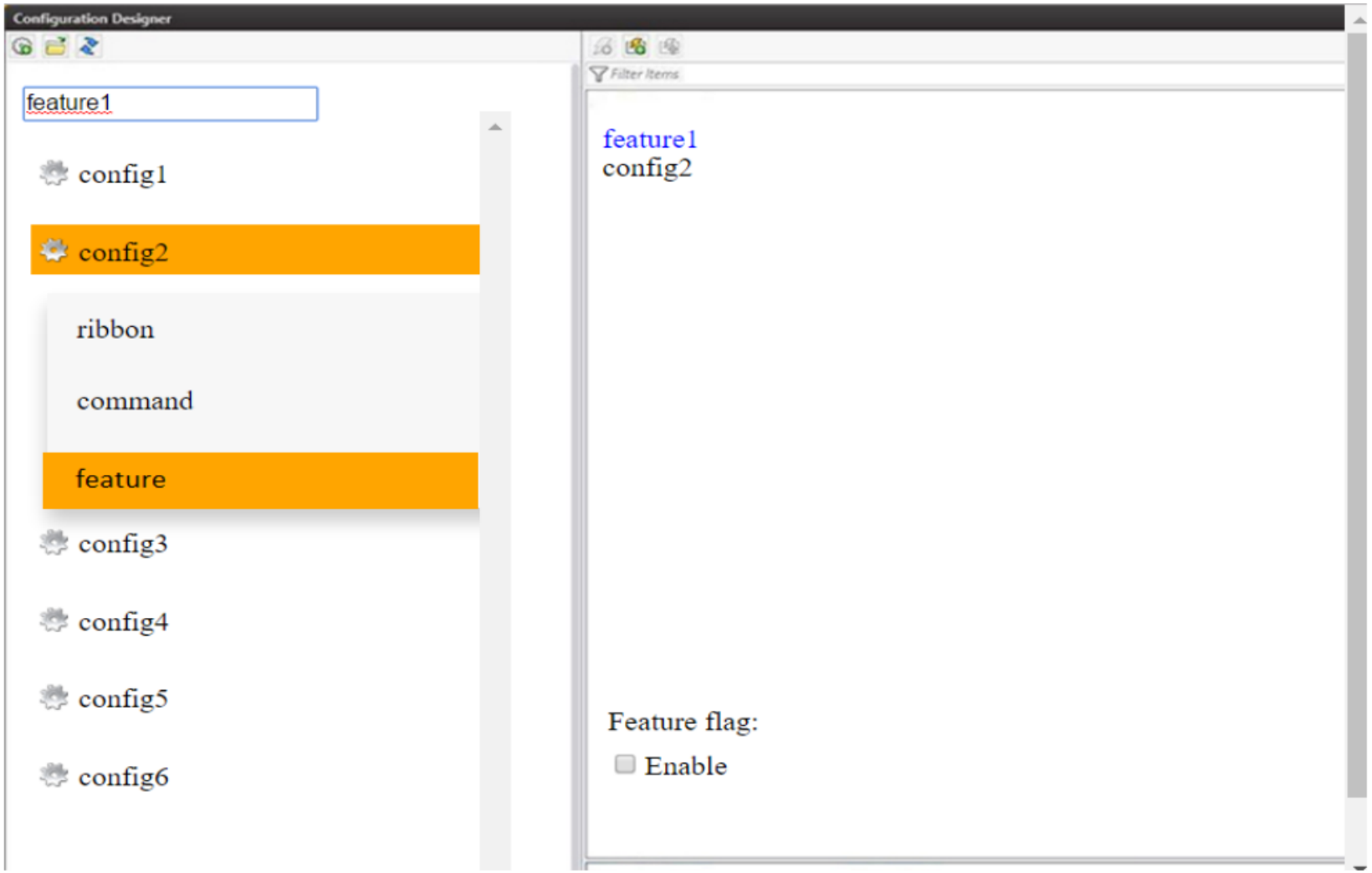


The highfidelity prototype



GUI of the prototype

The highfidelity prototype



Data presented after a matching search. A feature flag can be enabled or disabled by checking or unchecking the checkbox

Prototype test table

Task 1: with main program

Can you find the feature flag" use new well zone model" in under six minutes?

Participants	Mission done?	Time/min	comment
1	/	/	Didn't paricipate
2	N	Max	
3	Y	00:46	
4	Y	02:32	
5	Y	00:44	
6	Y	00:22	
7	Y	00:54	
8	Y	02:31	

Table code : Y=yes ,N=no . Max=6:min

Task 2: with the prototype.

Task duty: Can you find feature5, and feature6 and turn it on in under six minutes

Participants	Mission done?	Time/min	comment
1	Y	1:59	Just a test round
2	Y	1:21	
3	Y	00:40	
4	Y	00:37	
5	Y	00:29	
6	Y	00:28	
7	Y	00:33	
8	Y	00:36	

Table code : Y=yes ,N=no . Max=6:min

The Time difference

Participants	Time saving /min
1	/
2	4:39
3	00:06
4	01:59
5	00:15
6	-00:06
7	00:21
8	01:55

Task 1: success rate:

6/7 = 87.5 % success

Task 2: success rate:

7/7= 100% success

The Test

8 Paticipants

2 tasks

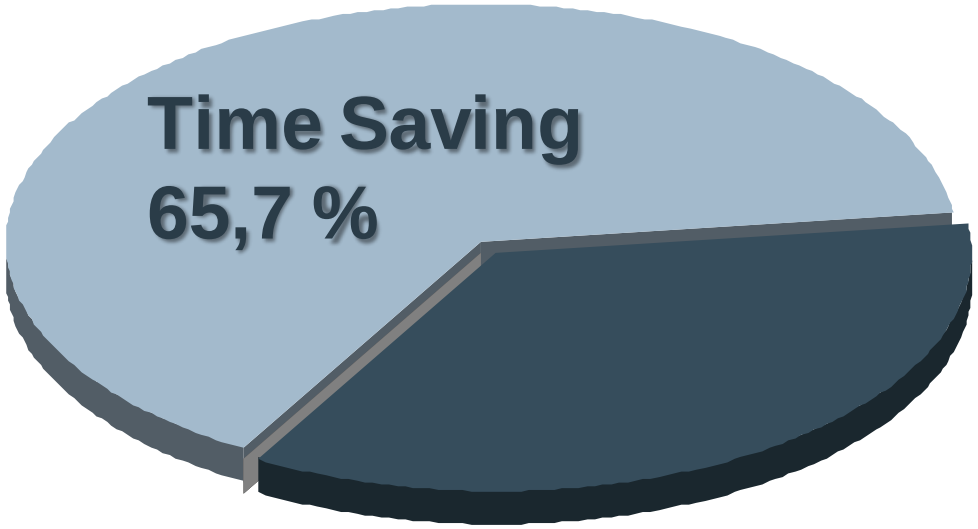
Simplicity: 4,1/5

Usefulness: 4,4/5

Time saving: 4,4/5

Satisfaction: 3,8/5

The average score



-Simplicity :4,1/5
-Usefulness :4,4/5
-Satisfaction :3,8/5

How could this help improve usability?

The ISO 9241 definition of *usability*:

*"The extent to which a product can be used by specified users to achieve specified goals with **effectiveness**, **efficiency**, and **satisfaction** in a specified context of use."*

Improvements:

- Effeciency (**67,5%** time saved)

- Effectiveness (**100%** succesion rate vs **87,5%**)

- Satisfaction (satisfaction score of **3,8/5**)

Thank you!