



Combining and Uniting Business Intelligence with Semantic Technologies

Acronym: CUBIST

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Evaluation of Use Case Prototype

Abstract:

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1	Π	NTRODUCTION	4
2	D	DESCRIPTION OF TEST USERS	5
	2.1	Test User 1	5
	2.2	TEST USER 2	5
	2.3	FUNCTIONALITY UTILISATION	6
3	Р	PREDEFINED TASKS	7
	3.1	TASK 1 – ANALYSIS OF SPECIFIC ATTRIBUTES AND LINKS (CONTEXTUAL INTERPRETATION)	7
	3.2	TASK 1 - DEFINED TASK STEPS (ACTIONS TO EXECUTE)	8
	3.3	TASK 2 – OBTAINING CONTACT INFORMATION (CONTEXTUAL INTERPRETATION)	9
	3.4	TASK 2 – DEFINED TASK STEPS (ACTIONS TO EXECUTE)	10
4	S	UMMARY OF THE EVALUATION PLAN	11
5	Π	NTERVIEW QUESTIONS AND ANSWERS	12
	5.1	Test User 1	12
	5.2	TEST USER 2	16
6	Т	THE RESULTS OF THE QUESTIONNAIRE	21
	6.1	Test User 1	21
	6.2	TEST USER 2	26





1 Introduction

The use case in question is related entirely to the job market, in which extensive occupational data from the UK is used. In particular CUBIST uses this vacancy data in order to present the large set of data collected in a format which is easily usable, beneficial and innovative from the user's perspective. It takes the data and makes it easily accessible whilst also enabling the most detailed levels of data to be extracted.

During this process we shall conduct a brief overview of the INN prototype, this will analyse all of the features available within the platform, with a genuine use case attached to each subsection of the platform, whether this be a singular element or a combination of a number of elements within the platform.



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2 Description of Test Users

There have been two test users, the two users are described in the following section.

2.1 Test User 1

Test User 1 is an Economics Student at Cardiff University who is currently on a summer internship as a Project Manager/Business Analyst. He has been managing a developing project within the recruitment agency market for Innovantage.

He also has a background in technological development with vast experience in scrutinising data. Thus it is sound to assume that this user can take advantage of some of the more intricate features within the cubist model, such that this user is associated with use case one. His usual activities involve analysing large data sets, general management and coordination of projects as well as developing and initiating tests of new platforms.

2.2 Test User 2

Test User 2 is a qualified business analyist. She participates in operations through the mission, in this case Innovantage, which is a company that provides lead generation information to recruitment consultants. However her background varies from computer science to data analysis.

Prior to joining Innovantage, she was a full time student at Cardiff University studying computer science thus she has extensive and detailed knowledge of information systems.

Her usual work flow at Innovantage includes activities such as data analysis, supporting clients and running the support sector. Further to this, if there is a serious incident within Innovantage, for a customer or an internal system, she is responsible for following procedures in order to make sure this keeps to our SLA whilst ensuring the issue is fixed quickly and efficiently to minimise the potential impact.





2.3 Functionality Utilisation

The CUBIST prototype has to deal with our two user defined tasks. Here we will look at two different tasks which will be defined in more detail, both of which are connected to the two different users as set out in the previous section.

The following table summarises the differences between the two tasks, with specific details of which functionality each task will use.

	Data Browsing	Graph Exploration	Multiple facets	Scaling	Visual analytics
Use Case One	\checkmark	\checkmark	\checkmark		7
Use Case Two	\checkmark		\checkmark		



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3 Predefined Tasks

For the evaluation, we have constructed two differing tasks.

The first task takes a more analytical approach looking at the bigger picture with regards to the job market. Here we aim to analyse elements of genuine interest to the user using the interactive graphical representation diagram available for these attributes.

The second task is a more applied task in terms of the recruitment market, here we aim to gather contact information from specific advertisers with known jobs of interest. Firstly we search for jobs of known interest find the direct advertiser for each of those vacancies and then explore their contact information in order to try and make the advertiser aware of the recruitment agencies presence and services offered.

The details for the tasks and (possible) actions on how to conduct them in the CUBIST prototype are described next.

3.1 Task 1 – Analysis of Specific Attributes and Links (Contextual Interpretation)

The first task looks to use the multiple facet element combined with the data browsing to identify a specific area of interest.

Thus having defined and then searched these specific elements the user can now visualise these jobs within the explore selection utilising the entity relationship diagram. This allows the user to drill down into the specific attributes which are connected to each role and then indentify those of which hold the most relevance to the user in question. Having identified the specific elements of interest the user can then select specific jobs, or can purely analyse the jobs within a particular locality in order to aid research or to monitor demand/supply.





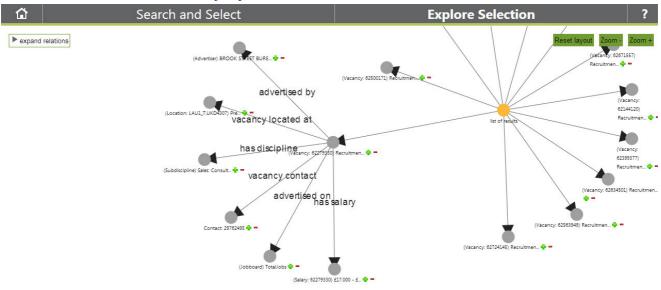
3.2 Task 1 - Defined Task Steps (Actions to Execute)

AIM: Gather Information surrounding the job position of recruitment sales consultant, with specific regards to the salary available for each position.

- Here the users needs to select and check the raw salary option under the 'salary' facet
- They then need to enter the job title of Recruitment Sales Consultant under the facet of 'Vacancy'

û	Search and Select		Sc	ale Selection	Explore Selec	ction
Advertiser	•	Listview	Tableview	Т		
 Contact 	•		10 🕑			Refresh
Discipline	۰	1 (Vacar	cy: 62399377) R	ecruitment Sales Consultant		
► Jobboard	۲	2 (Vacar	cy: 62385450) R	ecruitment Sales Consultant		
Location	•	3 (Vacar	ca 62144120) D	ecruitment Sales Consultant		
Salary	•					
 raw salary Subdiscipline 		4 (Vacar	cy: 62516116) R	ecruitment Sales Consultant		
Vacancy	0	5 (Vacar	cy: 62634501) R	ecruitment Sales Consultant		
 job title Recruitment 	nt Sales Consultant	6 (Vacar	icy: 62724145) R	ecruitment Sales Consultant		
	Clear	7 (Vacar	cy: 62500171) R	ecruitment Sales Consultant		
		8 (Vacar	cy: 62563949) R	ecruitment Sales Consultant		
		9 (Vacar	cy: 62434241) R	ecruitment Sales Consultant		
		10 (Vacar	icy: 62279330) R	ecruitment Sales Consultant		

- The users can then select the explore selection option in order to visually explore the selected job vacancy with regards to the attributes associated
- The users then needs to select a particular vacancy in order to see the particular characteristics attributed to the vacancy; here they can explore the salary, the job-board the position was advertised with, contact details, the location and the advertiser too.
- By analysing each particular vacancy the users can build up a good picture of the particular market their selected job position exists within.







3.3 Task 2 – Obtaining Contact Information (Contextual Interpretation)

Task two makes use of the CUBIST prototype in a more determined market orientated fashion. Here the user wants to use the multiple facet system in order to identify particular jobs of relevance or interest. They will search for determined jobs with determined characteristics with the goal or obtaining more information regarding each position. Here as the user is operating within the recruitment agency market they may require contact details for particular advertisers with jobs of known interest.

For example they may have supply for a particular position within a given locality, and their aim is to couple this supply with demand found within the CUBIST platform. Thus contact details within this scenario become integrally important, here the user selects email and/or telephone number as one of their key facets. These contact details can be of major significance especially for gaining business. This means that the user can not only indentify jobs of which they have an interest in but they can also gather significant contact details within the same database rather than using an external source to find these details. Not only does this provide key information but it also provides a degree of operational convenience.

So firstly they will search for a particular position within a particular locality, they can choose to include more characteristics if they wish.

Having indentified the advertisers with known jobs in the interested area they can then search for the advertiser's contact details.

Thus having firstly identified the specific jobs and then the advertisers with known jobs, they can then find the contact details within the system in order to allow them to contact the advertisers and try to generate business.





3.4 Task 2 – Defined Task Steps (Actions to Execute)

Aim: To gather contact details for known advertisers for Java Script Developer jobs.

- First the user needs to define the locality they are searching with as London
- Then they should enter the job title under the vacancy facet as 'Java Script Developer'

Search and Sel	ect Scale Sel	ection	Explore Selection
• Advertiser 🛛 💿	Listview Tableview		
• Contact 🛛 🔍	(4 4 1-5)		Refresh
• Discipline 💿	Object: Advertiser	city	job title
· Jobboard 💿	(Advertiser) Creative Personnel	London	JavaScript Developer
· Location	(Advertiser) Blue Skies Marketing Recruitment	London	JavaScript Developer
city 🗹	(Advertiser) Roc Search	London	JavaScript Developer
✓ London	(Advertiser) CPH Consulting Ltd	London	JavaScript Developer
· Salary ©	(Advertiser) CPH Consulting	London	JavaScript Developer
• Subdiscipline 💿			
• Vacancy 💿			
job title 🔽			
JavaScript Developer			
Clear			

- As the advertisers are given under this search, the user should make note of the advertisers given under the initial search
- Then the user should make a secondary search where they enter the specific advertisers under the 'advertiser' facet
- Having done this the user should then select their preference in terms of the contact details they wish to gather (telephone number/email or both)
- They should then carry out the specific search to obtain the desired contact information.

	h and Select	Scale Sele		Explore Selection	
Advertiser	0	Listview Tableview			
name		🖲 🖲 1-2 🕑			Refresh
 Creative Personnel Blue Skies Marketing 	Descuitment	Object: Advertiser	name	telephone number	
CPH Consulting Ltd	Recruitment	(Advertiser) Blue Skies Marketing Recruitment	Blue Skies Marketing Recruitment	0208 2419070	
Contact	•	(Advertiser) Creative Personnel	Creative Personnel	0207 614 8000	
 telephone number Discipline 					
Jobboard	•				
Location	۲				
Salary	۲				
Subdiscipline	۲				
Vacancy	۲				
	Clear				





4 Summary of the Evaluation Plan

In this section we describe how we prepared our users and conducted the evaluation.

Given the fact that CUBIST is an intricate research prototype where sophisticated analysis methods are fundamental to its functionality, it therefore requires a user to have a competent level of knowledge in order for the user to access the full extent of it technological capabilities called for a detailed and carefully planned preparation phase. Thus it was obvious that a user with no experience of the system would struggle to complete a careful analysis unless they were given a full tutorial of how to competently operate the system.

In order to conquer these potential issues it was essential that the users undergo an extensive tutorial period where they could not only understand the platform but also get to grips with its technical aspects too. Thus our users read the short introductory text describing the CUBIST prototype, FCA and visualisations. Not only did our test users watch the comprehensive tutorial video at <u>http://www.youtube.com/watch?v=Kuu756nr1_I</u>, but we also organised a live interactive online tutorial to ensure that the prototype was not only fully comprehended but also to allow a process of two-way engagement so any qualms could be allayed.

The second step of the evaluation was to define the tasks that were to be completed by the test users. Here we collaborated with the subject matter experts within the recruitment industry in order to gauge real-life tasks which not only have evaluation value but also have connections with real world problems within the market.

The evaluation sessions were conducted in house, given that our test users are also based within our Cardiff office. During the evaluation session we gave the test users a chance to complete the user tasks, free from interruption and influence in order to conduct a fair and accurate test of the user tasks. Here we recorded their actions as they tried to complete the process, as well as asking for their thoughts and feelings at determined milestones within the evaluation process.

Following the completion of predefined tasks using CUBIST prototype, an interview immediately followed. Predefined open ended questions were answered by the test users and this completed the majority of the evaluation. A short questionnaire was also sent to the test users, to be completed independently, and the results of this can also be seen in the following section.





5 Interview Questions and Answers

This section will list the interview questions as well as the answers given by two test users.

5.1 Test User 1

- Name: Nathan Milsom
- Use Case (HWU; SAS; INN): INN
- Age: 20
- Gender: Male
- Profession: Project Manager
- Computer Usage per day in hour: 8
- Date of Test: DD/MM/2013 28/08/2013
- Location of Test: Cardiff, UK
- Please rate your overall computer skills?

⊠ Very good (e.g. programming, security, data modeling, …).

 \Box Good (e.g. frequently using spreadsheet applications, advanced in office tools, analysis tools,...)

Standard (e.g. surfing, e-mail and writing simple documents, but not much more).

 \square Bad.

5.1.1 For the tasks as conducted:

1. Please shortly describe the tasks you conducted with CUBIST:

Please see the detailed task descriptions above.

What do you expect from a system to fulfill these tasks?

I would expect to easily be able to access the data and then view and analyse it in a detailed or simple format depending on my needs.

- 2. Did the system offer you the right information to fulfill your analytical tasks?
 - If yes, what kind of information and system functionality provided did you find especially helpful?

Yes, I thought the faceting system worked expertly and I also appreciated the visual graphics available for some of the searches I conducted.





 If no, what was missing from your point of view (regarding data provided/visualization possibilities/ interaction possibilities) to derive the desired information?

The visual interactive graphics were sometimes confusing and unclear when visualising a number of different attributes within the model.

- 3. Did you discover new facts during your analysis tasks that you had not expected to discover at all before?
 - If yes, what kind of new facts did you discover that were most surprising for you?
 - o No
 - o No.
- 4. If the tasks fulfilled are typical for your daily work, do you think the tool can enrich your daily work by offering new ways to analyze your data?
 - Yes, because

Yes the process of visualising data for a particular job in terms of an interactive visual graphic can be very useful especially when looking for links and trends within specific job vacancies, with more data this could be a very powerful tool.

- No, because Click here to enter text.
- Partly, because Click here to enter text.

5.1.2 Comparing the different CUBIST means to access information

Which of CUBIST's analysis components did you find most valuable for your tasks and why?

• "Search and Select"-Panel

This was very useful in terms of selecting specific data elements of which were of interest to me, it allowed me to hone in on intricate details and made my searches far more efficient and productive too.

- Instance View Not Used.
- "Explore Selection"-Panel

This was useful when using the diagrammatical element to portray the information selected within the search and select element. Here you can drill down even more specifically into attributes in order to see the potential links and even attributes for specific jobs.

- "Scale Selection"-Panel Not used
- "Analyze Selection"-Panel





Not used.

- Traditional Visualization (e.g. bar charts): Not used.
- Other Function:
 - Not used.
- 5. For each of the following components, what do you think for what kind of information need it is suited best (e.g. number analysis ...)?
 - "Search and Select"-Panel

For the search and select data needs to be easily definable within specific headings, in order to give a 'clean' view of the data

- "Navigate in Data"-Panel Skipped.
- "Explore Selection"-Panel

I think the current data works well within the diagrammatic view, however there should be an option to select specific fields within a certain order of importance, furthermore it is integral that data is not mis-specified as this will lead to confusion.

- "Scale Selection"-Panel Not Used
- "Analyse Selection"-Panel Not Used
- Traditional Visualization (e.g. bar charts): Not Used
- Other Function: Not Used.
- How easy was it for you to choose the most appropriate analysis approach and visualization for your needs from the overall functionalities offered:
 I found this difficult to begin with as this is purely an experience issue, the more time you spend using CUBIST the better adapted you get at choosing the correct visualization.
- 7. What (functionalities and/or system in general) was the major drawback of CUBIST for you and why?

The performance is very frustrating as is its nonsensical inconsistency when searching

- 8. Do you think you understood how all the different means offered by CUBIST to access information interact? Comment if necessary.
 - a. Yes, I think I understood.
 - b. No, Click here to enter text.
- 9. How did you like the guidance offered by the system to navigate through the available information? Please comment your decision.





- Guidance was to an acceptable standard
- 10. Did you immediately understand how to read the visualizations and use the analysis functionalities in the tool?
 - Yes: If yes, can you describe what made it easy for you to understand the tool?
 - No: If no, what made it difficult?

There was no real instructions for each visualization on each page, but having spent a bit of time playing around with the system it became simple.

5.1.3 Disliked/Unneeded/Missing Features

In this part, we aim at finding out disliked, unneeded or missing features. We do this per component.

- 11. For each of the following components, which features do you dislike most? And Why?
 - "Search and Select"-Panel List view is poor.
 - "Navigate in Data"-Panel Not Used.
 - "Explore Selection"-Panel
 More explanation of the functionality needed Zoor
 - More explanation of the functionality needed. Zoom function should be better implemented, the real estate size of the visualization should be larger.
 - "Scale Selection"-Panel Not used
 - "Analyse Selection"-Panel Not used
- 12. For each of the following components, which features are not needed from your point of view?
 - "Search and Select"-Panel List view.
 - "Navigate in Data"-Panel Not Used.
 - "Explore Selection"-Panel N/A
 - "Scale Selection"-Panel Not used
 - "Analyse Selection"-Panel Not used





- 13. And finally, each of the following components, which features missing?
 - "Search and Select"-Panel
 Having data for each facet, if not it should be greyed out
 - "Navigate in Data"-Panel Not Used
 - "Explore Selection"-Panel
 Different style visualizations, you have to stick to the one given in this section would be good to have some variation.
 - "Scale Selection"-Panel

Nor Used.

• "Analyse Selection"-Panel Not Used

5.1.4 Famous last words

Do you have any more comments or remarks?

More experience and time would lead to a better user experience, in order to reduce adjustment time either more tutorial based guidance is needed or a simplification of the functionality.

5.2 Test User 2

- Name: Danielle Thomas
- Use Case (HWU; SAS; INN): INN
- Age: 21
- Gender: Female
- Profession: Support Coordinator
- Computer Usage per day in hour: 9
- Date of Test: DD/MM/2013 30/08/2013
- Location of Test: [City, State] C
- Please rate your overall computer skills?
 - □ Very good (e.g. programming, security, data modeling, ...).

 \Box Good (e.g. frequently using spreadsheet applications, advanced in office tools, analysis tools,...)

- \Box Standard (e.g. surfing, e-mail and writing simple documents, but not much more).
- \Box Bad.





5.2.1 For the tasks as conducted:

14. Please shortly describe the tasks you conducted with CUBIST:

I visualized the data while pulling out contact information

What do you expect from a system to fulfill these tasks?

I expected the system to perform these tasks seamlessly

- 15. Did the system offer you the right information to fulfill your analytical tasks?
 - If yes, what kind of information and system functionality provided did you find especially helpful?
 - Yes, contact information for the jobs
 - If no, what was missing from your point of view (regarding data provided/visualization possibilities/ interaction possibilities) to derive the desired information?

Click here to enter text.

- 16. Did you discover new facts during your analysis tasks that you had not expected to discover at all before?
 - If yes, what kind of new facts did you discover that were most surprising for you? Click here to enter text.
 - o No.
- 17. If the tasks fulfilled are typical for your daily work, do you think the tool can enrich your daily work by offering new ways to analyze your data?
 - Yes, because Click here to enter text.
 - No, because Click here to enter text.
 - Partly, because
 The task's did enrich daily work, but because of the performance it could only partially do this

5.2.2 Comparing the different CUBIST means to access information

Which of CUBIST's analysis components did you find most valuable for your tasks and why?

- "Search and Select"-Panel Click here to enter text.
- Instance View





Click here to enter text.

- "Explore Selection"-Panel
 Some of the visualizations are different
- "Scale Selection"-Panel Click here to enter text.
- "Analyse Selection"-Panel Click here to enter text.
- Traditional Visualization (e.g. bar charts): Click here to enter text.
- Other Function: Click here to enter text.
- 18. For each of the following components, what do you think for what kind of information need it is suited best (e.g. number analysis, ...)?
 - "Search and Select"-Panel Click here to enter text.
 - "Navigate in Data"-Panel Click here to enter text.
 - "Explore Selection"-Panel Click here to enter text.
 - "Scale Selection"-Panel Click here to enter text.
 - "Analyse Selection"-Panel Click here to enter text.
 - Traditional Visualization (e.g. bar charts): Job type analysis
 - Other Function: Click here to enter text.
- 19. How easy was it for you to choose the most appropriate analysis approach and visualization for your needs from the overall functionalities offered:
 - Very easy
 - o Easy
 - Difficult
 - Very difficult

Because, Difficult, due to the graphs being un-labeled

20. What (functionalities and/or system in general) was the major drawback of CUBIST for you and why?





The performance, the issue with labels

- 21. Do you think you understood how all the different means offered by CUBIST to access information interact? Comment if necessary.
 - Yes, Yes
 - No, Click here to enter text.
- 22. How did you like the guidance offered by the system to navigate through the available information? Please comment your decision.
 - Very good guidance
 - Good guidance.
 - Ok. Not to mention
 - Poor guidance
 - Very poor guidance.

Because, Ok

- 23. Did you immediately understand how to read the visualizations and use the analysis functionalities in the tool?
 - Yes: If yes, can you describe what made it easy for you to understand the tool? Yes, prior training
 - No: If no, what made it difficult? Click here to enter text.

5.2.3 Disliked/Unneeded/Missing Features

In this part, we aim at finding out disliked, unneeded or missing features. We do this per component.

24. For each of the following components, which features do you dislike most? And Why?

- "Search and Select"-Panel Click here to enter text.
- "Navigate in Data"-Panel Click here to enter text.
- "Explore Selection"-Panel Click here to enter text.
- "Scale Selection"-Panel Click here to enter text.
- "Analyse Selection"-Panel Labels on graphs





- 25. For each of the following components, which features are not needed from your point of view?
 - "Search and Select"-Panel Click here to enter text.
 - "Navigate in Data"-Panel Click here to enter text.
 - "Explore Selection"-Panel Click here to enter text.
 - "Scale Selection"-Panel This is not needed
 - "Analyse Selection"-Panel Click here to enter text.

26. And finally, each of the following components, which features missing?

- "Search and Select"-Panel Click here to enter text.
- "Navigate in Data"-Panel Click here to enter text.
- "Explore Selection"-Panel Click here to enter text.
- "Scale Selection"-Panel Click here to enter text.
- "Analyse Selection"-Panel Labels

5.2.4 Famous last words

Do you have any more comments or remarks?

Click here to enter text.





6 The results of the questionnaire

This section will list the interview questionnaire as well as the answers given by two test users.

6.1 Test User 1

6.1.1 For the overall prototype

The CUBIST software was easy to use and work with.	strongly agree neutral strongly disagree n/a Image:
Neglecting the currently prototypic character, I would like to use the CUBIST software in future again.	strongly neutral strongly disagree n/a
In future, I would prefer CUBIST to other analytical tools I currently use.	strongly agree neutral strongly disagree n/a Image:
Using CUBIST software could make my work more effective and efficient.	strongly agree neutral strongly disagree n/a Image:
The integration of different components (used to access, explore and visualize information) was helpful for fulfilling my tasks.	strongly agree neutral strongly disagree n/a Image:
The different components and the visualizations in CUBIST are well integrated.	strongly agree neutral strongly disagree n/a Image:
It is clear how the different components interact.	strongly agree neutral strongly disagree n/a Image:
The navigation/interaction functionalities were easy to understand and apply.	strongly agree neutral strongly disagree n/a Image:
It was easy to follow the steps performed by the system when using the interaction functionalities.	strongly agree neutral strongly disagree n/a Image:





6.1.2 For the "Search and Select" Component

The purpose and function of the component is	strong agree	neutr	al strongly disagree	n/a
clear.				
The component is easy to understand and use.	strong agree	neutr	al strongly disagree	n/a
The interface is appealing and attractive.	strong agree	neutr	al strongly disagree	n/a
The component is useful.	strong agree	neutr	al strongly disagree	n/a
	\boxtimes			
For some kinds of information needs or queries, particularly this component (or similar components based on the same approach) is useful.	strong agree	neutr	al strongly disagree	<u>n/a</u>
I have similar functionalities in the tools I usually use.	strong agree	neutr	al strongly disagree	n/a





6.1.3 For the "Navigate in Data"-Component

The purpose and function of the component is		strongly agree	neutral	strongly disagree	n/a
clear.	[\boxtimes
The component is easy to understand and use.		strongly agree	neutral	strongly disagree	n/a
	[\boxtimes
The interface is appealing and attractive.		strongly agree	neutral	strongly disagree	n/a
	[\boxtimes
The component is useful.		strongly agree	neutral	strongly disagree	n/a
	[\boxtimes
For some kinds of information needs or queries, particularly this component (or similar components based on the same approach) is useful.	[strongly agree	neutral	strongly disagree	n/a
I have similar functionalities in the tools I usually use.		strongly agree	neutral	strongly disagree	n/a





6.1.4 For the "Explore Selection" Component

The purpose and function of the component is	stror agr		neut	tral	stroi disa		n/a	_
clear.			\boxtimes					•
The component is easy to understand and use.	stror agr		neut	tral	stroi disa		n/a	
			\boxtimes					•
The interface is appealing and attractive.	stror agr	0.5	neut	tral	stroi disa		n/a	
				\boxtimes				•
The component is useful.	stror agr	0.5	neut	tral	stroi disa	05	n/a	
		\boxtimes						
For some kinds of information needs or queries, particularly this component (or similar components based on the same approach) is useful.	stror agr			tral	stroi disa	0.5	n/a	•
I have similar functionalities in the tools I usually use.	stror agr			tral	stroi disa	05	n/a	-





6.1.5 For the "Analyse Selection"-Component

The purpose and function of the component is clear.	strongly agreeneutralstrongly disagreen/aImage: Image of the strongly disagreeImage of the strongly disagreeImage of the strongly disagreeImage of the strongly disagree
The component is easy to understand and use.	strongly agree neutral strongly disagree n/a Image: Image in the strong
The interface is appealing and attractive.	strongly agree neutral strongly disagree n/a Image: Image in the strong
The component is useful.	strongly agree neutral strongly disagree n/a Image: Image in the strong
For some kinds of information needs or queries, particularly this component (or similar components based on the same approach) is useful.	strongly neutral strongly disagree n/a
I have similar functionalities in the tools I usually use.	strongly agree neutral strongly disagree n/a Image: Image in the strong
The visualizations were easy to understand.	strongly agree neutral strongly disagree n/a Image:
There are visualizations available that did fit my tasks very well.	strongly agree neutral strongly disagree n/a Image:
The integration of different visualizations was helpful for fulfilling my task.	strongly agree neutral strongly disagree n/a Image:
It is clear how the different visualization interact.	strongly agree neutral strongly disagree n/a Image: Image in the strong





6.2 Test User 2

6.2.1 For the overall prototype

The CUBIST software was easy to use and work with.	strongly agree neutral strongly disagree n/a Image:
Neglecting the currently prototypic character, I would like to use the CUBIST software in future again.	strongly agree neutral strongly disagree n/a Image:
In future, I would prefer CUBIST to other analytical tools I currently use.	strongly agree neutral strongly disagree n/a Image:
Using CUBIST software could make my work more effective and efficient.	strongly agree neutral strongly disagree n/a Image:
The integration of different components (used to access, explore and visualize information) was helpful for fulfilling my tasks.	strongly agree neutral disagree strongly disagree n/a Image: Imag
The different components and the visualizations in CUBIST are well integrated.	strongly agree neutral disagree strongly disagree n/a Image: Imag
It is clear how the different components interact.	strongly agree neutral disagree strongly disagree n/a Image: Imag
The navigation/interaction functionalities were easy to understand and apply.	strongly agree neutral disagree strongly disagree n/a Image: Imag
It was easy to follow the steps performed by the system when using the interaction functionalities.	strongly agree neutral strongly disagree n/a Image:





6.2.2 For the "Search and Select" Component

The purpose and function of the component is clear.		strongly neutral agree		strongly disagree		n/a			
ciear.				\boxtimes					
The component is easy to understand and use.		strongly agree neutral		tral	strongly disagree		n/a		
				\boxtimes					
The interface is appealing and attractive.		strongly agree		neutral		tral	strongly disagree		n/a
						\boxtimes			
The component is useful.		ongly gree	neu	tral	stro disa	0.5	n/a		
	\boxtimes								
For some kinds of information needs or queries, particularly this component (or similar components based on the same approach) is useful.		ongly gree	neu	tral	stroi disa	0.5	n/a		
I have similar functionalities in the tools I usually use.		ongly gree	neu	tral	stroi disa		n/a		





6.2.3 For the "Navigate in Data"-Component

The purpose and function of the component is clear.	ction of the component is		ongly neutral gree		strongly disagree		n/a
cieai.							\boxtimes
The component is easy to understand and use.		strongly agree		tral	stron disag		n/a
							\boxtimes
The interface is appealing and attractive.		rongly agree	neut	tral	stron disag	0.5	n/a
							\boxtimes
The component is useful.		rongly agree	neut	tral	stron disag	0.5	n/a
							\boxtimes
For some kinds of information needs or queries, particularly this component (or similar components based on the same approach) is useful.		rongly agree	neut	tral	stron disag	0.5	n/a
I have similar functionalities in the tools I usually use.		rongly agree	neut	tral	stron disag	0.5	n/a





6.2.4 For the "Explore Selection" Component

The purpose and function of the component is clear.	stron agre		neut	ral	stroi disa;	•••	n/a				
The component is easy to understand and use.		strongly agree		neutral				tral strongly disagree		0.5	n/a
The interface is appealing and attractive.	stron agre	0.5	neut	ral	stroi disa;	0.5	n/a				
The component is useful.	stron agre		neut	ral	stroi disa;	0.5	n/a				
For some kinds of information needs or queries, particularly this component (or similar components based on the same approach) is useful.	stron agro	•••	neut	ral	stroi disa		n/a				
I have similar functionalities in the tools I usually use.	stron agre	0.5	neut	ral	stroi disa		n/a				





6.2.5 For the "Analyse Selection"-Component

The purpose and function of the component is clear.	strongly agree neutral strongly disagree n/a Image:
The component is easy to understand and use.	strongly agree neutral strongly disagree n/a Image:
The interface is appealing and attractive.	strongly agree neutral strongly disagree n/a Image: Image of the strong
The component is useful.	strongly agree neutr al strongly disagree n/a Image: Image
For some kinds of information needs or queries, particularly this component (or similar components based on the same approach) is useful.	strongly neutral strongly n/a disagree n/a
I have similar functionalities in the tools I usually use.	strongly agree neutral strongly disagree n/a Image:
The visualizations were easy to understand.	strongly agree neutral strongly disagree n/a Image:
There are visualizations available that did fit my tasks very well.	strongly agree neutral strongly disagree n/a Image:
The integration of different visualizations was helpful for fulfilling my task.	strongly agree neutral strongly disagree n/a Image: Image in the strong
It is clear how the different visualization interact.	strongly agree neutral strongly disagree n/a Image: