

Informed Consent

Thank you for participating in our experiment. In this experiment, we investigate the impact of various graphic representations on the quality assurance of hazard-mitigating requirements. By participating, you gain valuable insights into the methods of empirical software engineering and broaden your knowledge with model-based specification techniques.

The experiment consists of three phases

1. In the first phase, some demographic information are collected. These are treated anonymously and are used purely to guide the analysis of experimental data.
2. The second phase will start with an in-depth introduction to the quality assurance task at hand. You will be asked to visually inspect a model-based requirements specification consisting of one diagram at a time. After you've finished inspecting a diagram, you're asked to decide whether the functionality specified in the diagram leads to injury to humans or damage to other systems (in the following, this is called a "hazard"). Indicate your answer by clicking on either "yes" if you think a hazard might occur during operation or "no" if you think the system is safe. Also, please provide a brief written rationale of why you made that decision.
3. In the last phase, you're asked to provide answers to a few questions. These questions aim at assessing your personal experience during quality assurance.

The experiment takes approximately 30 minutes.



Your participation is absolutely voluntary. You are free to discontinue at any point without penalty. Your data will be treated anonymously - it is not possible to associate any data set with a concrete person and your data will be used only for non-commercial scientific research.

If you have questions regarding the experiment, are experiencing strain or discomfort after participating, or would like to know more about this research, please contact the principle investigator:

Bastian Tenbergen, BSc, MA
Assistant Professor for Computer Science
Department of Computer Science
State University of New York at Oswego, USA
bastian.tenbergen@oswego.edu

This experiment was approved by the Human Subjects Committee at SUNY Oswego. If you have questions about participating in the study or its approval, please contact David Bozak (david.bozak@oswego.edu), chair of the committee.

By signing here, you give your consent to participate:

ID	Question	Rather HRDs					Rather ADs w/ Tables::				
											
		Location	Reason/Description	Effect / Condition	Trigger/Condition	Safety Goal					
PH01_01	I could complete requirements reviews better using this diagram type if I had done it before.	O	O	O	O	O					
PH01_02	The results of using this diagram type are more apparent to me.	O	O	O	O	O					
PH01_03	This diagram type improves by performance in reviewing requirements.	O	O	O	O	O					
PH01_04	I believe I could better communicate to others the consequences of reviewing requiriements using this diagram type.	O	O	O	O	O					
PH01_05	The data that I need is displayed in a form that is more readable and easier to understand in this diagram type.	O	O	O	O	O					
PH01_06	Using this diagram type, the exact meaning of data elements is either more obvious or easiert to find out.	O	O	O	O	O					
PH01_08	There is so much information in different places and in so many forms that it is harder to know how to review requirements effectively using this diagram type.	O	O	O	O	O					

ID	Question	Rather HRDs					Rather ADs w/ Tables::				
PH02_01	This diagram type enhances my review effectiveness.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH02_02	I have less difficulty telling others how my review results using this diagram type.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH02_03	This diagram type increases my review productivity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH02_04	I could complete requirements reviews better using this diagram type if someone showed me how to do it first.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH02_05	I could complete requirements reviews better using this diagram type if no one was around to tell me what to do as I go.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH02_06	I am getting more of the training I need to be able to use the data of this diagram type during requirements reviews.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH02_07	There are so many different information in this diagram type, that it is harder to understand which one to use for requirements reviews.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH02_08	This diagram type is missing more critical data that would be very useful to requirements reviews.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

ID	Question	Rather HRDs					Rather ADs w/ Tables::				
PH03_01	I find this diagram type to be more useful in reviewing requirements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH03_02	There is not enough training on how to find, understand, access or use the information in this diagram type.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH03_03	I would have more difficulty explaining why using this diagram type may or may not be beneficial.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH03_04	The data maintained in this diagram type is exactly what I need to review requirements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH03_05	The exact meaning of modeling elements in this diagram type is simpler to comprehend.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH03_06	The data in this diagram type is presented in a more readable and more useful format.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PH03_07	It is more difficult to do my job effectively using this diagram type because some of the data I need is not available.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

DG01_01	How old are you?	
DG04	What's your gender?	
<input type="checkbox"/>	I am female.	
<input type="checkbox"/>	I am male.	
<input type="checkbox"/>	I prefer not to say.	
DG08	Please enter the last four digits of your student ID.	
DG05_01	What is the highest degree you possess (incl. degree program)	
DG06	What is your current (main) occupation?	
<input type="checkbox"/>	Undergraduate student	
<input type="checkbox"/>	Graduate student	
<input type="checkbox"/>	Researcher / Academic Staff / Professor	
<input type="checkbox"/>	Employee in the Industry	
DG02_01	Degree currently pursued	
DG02_02	Current degree program (major)	
DG02_03	How many semesters have you been studying that major?	
DG02_04	When do you expect to graduate?	

DG07_		How much experience do you have in the following areas?				
Area		Experience from...				
		... multiple industry projects	... one industry project	... ne or multiple academ-ic projects	... academic homework	I have no experi-ence in this area.
01	Automotive Software Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
02	Requirements Engineering in general	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
03	Modeling using Activity Diagrams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
04	Modeling using State Machine Diagrams / Automata	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
05	Requirements Reviews or Inspections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
06	Requirements-based Testing or Software Quality Assurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
07	Functional Design / Architecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
08	Software Component Design / Architecture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>