Distributed Software Development
Final Questionnaire

First and last name	Andrea Bottoli
Country you are from	Italy
Course location (FER / MdH / POLIMI)	POLIMI
Project name	Real-Time Bridge Monitoring
Your role(s) in project	Project Manager, Team Leader, Developer

Local site

Rate the overall quality of work coordination at the local site (0-no local communication, 1-very bad, 10-flawless)	8

Describe good experiences
• Learn new skills • Lead a distributed group • Manage the communication between the group, the customers and the supervisors

Describe problems and what caused them
• Problems in gather requirements ○ they changed a lot during the time cause the customers asked us to fit out product to European normative EU 305/2011 and Italian normative NTC 08 ○ the language used was not the same because they are Structural Engineers and we are Computer Engineer. Then we encountered some problem in comprehension • Problem with Ghazaleh ○ she didn't have enough skills (she is a Telecommunication Engineer) to stay on track with the project; moreover, she had too lot courses to follow, so she decided to left the group

Describe the intensity (not quality!) of collaboration with each of the local team members with the number 0-5; 0-no contact at all, 5-very intensive collaboration	
Local team member	Intensity (0-5)
Lorenzo Pagliari	5
Ghazaleh Shojaee Nia	1
Marko Brcic	3

Describe how that collaboration changed over time (and in different project phases)
The communication was more or less the same during all the phases of the project

Remote site

Rate the overall quality of work coordination with the remote site (0-no remote communication, 1-very bad, 10-flawless)	8

Describe good experiences
• Work with very skilled people • Funny meetings • All the people was available all the time and they worked a lot all the days • Improved technical language speaking in English all the time • Learned a lot of other cultural aspects • Learned a lot of other skills • Encountered the Swedish team in Sweden for the final presentation

Describe problems and what caused them
• Some minimal problem in make requirements from customers understandable for the whole team caused by the language used

Describe the intensity (not quality!) of collaboration with each of the remote team members with the number 0-5; 0-no contact at all, 5-very intensive collaboration	
Remote team member	Intensity (0-5)
Dzana Kujan	5
Nikola Radisavljevic	3
Miraldi Fifo	3
Jorn Tillmanns	4

Describe how that collaboration changed over time (and in different project phases)
• The communication initially was not very good cause I didn't know how to approach the group; then I received some suggestions from the group on how they prefer to be leaded and from then to now the communication has been very good

Communication

Rate (1-low usage, 5-very intensive usage) and describe which communication tools have you used for communication and their usefulness, and in which project phases (requirements, design, development, testing, documentation etc.)		
Tool	1-5	Project phases and tool usefulness
Skype	4	Tool used for direct chat with the group
Google Hangout	4	Tool used for face to face meetings
Google Drive	2	Tool used for sharing the initial drafts of the documents
Github Issues	4	Tool used to assign tasks to each memeber of the group

Describe how you prepared for team meetings
- Meetings scheduled in a "final" way: every monday and tuesday   - Meeting agendas to summarize the issues of the meeting before held id   - Issues on github to remember to the group the date of the meeting   - Chat on skype to postpone or arrive to an agreement over some changes upon the meeting scheduel   - Managing meeting with Dzana to keep track of the managing stuffs and to receive some suggestions to improve the quality of the meetings

Project work

What are, in your opinion, important issues in group work and why?	
Issue	**Why?**
Communication	It is necessary have a good communication to coordinate a distributed team; moreover if we have a lot of communication, we should have less misunderstandings.
Organization	A good organization is necessary to respect the deadlines and to prepare all the works in time. We did our best to improve our organization and all the deadlines were respected with, in my opinion, very good results.
Behaviour	Be friendly, not aggressive. Our group were always a friendly group, we had a lot of funny meetings and we joking a lot (not only work, I mean); we worked always with the smile and for the final presentation me and Lorenzo stayed in Dzana and Nikola home to spend some days together.
A common knowledge base	Is important that most of the team member have common knowledge base to understand what the other members are talking about. In our group when someone explain an idea, all members were able to follow the discussion; then, if someone doesn't know something, he ask and learn from someone else which knows that thing.
Availability	Availability to work with other people from different nations, culture and languages. Availability to work on communication problems. Be available if someone has some problem; try to understand him and try to help him. In our group, except a local isolated case, all members were available and willing to work hard (also all night long) to reach the result.

What were the causes of conflicts and how were they resolved (if they were resolved ☺)?
We had some conflicts with a team member that was not very available and that was very aggressive and sometime offensive; then that team member left the group because too much things to do. From then, we didn't have any other conflicts.

Rate and describe how pleased were you regarding information flow in your project team, had you been aware of overall project state, important information and events during the project work or did you feel isolated (1-kept in the dark, 5-completely aware)	
1-5	Description
5	We took all the decisions all together and each member were welcome to make proposals, suggestions and so on. During the meetings the first task is to update everyone on the project status, in order to be on track with the whole group and to avoid to left someone alone. Plus, I had a lot of chat meetings with all the member of the group to keep them on track and to ask them if they need some help or further explanations.

Rate and describe have you been aware about other people roles and their work status (1-had no idea about other people's work, 5-completely aware)	
1-5	Description
5	I was the project manager/leader so it was my role to be updated on what each one was doing. Plus, during each meeting, each member explained what was his status and what he was doing.

Rate and describe have you been satisfied with your role in the project and tasks you have been assigned during the project (1-very dissatisfied, 5-very satisfied)	
1-5	Description
5	I like a lot manage the group and also develop a real project; it was very hard take decisions, give "orders" and so on, but I'm very happy of this experience.

Rate and describe how much you could affect the project decisions (design, usage of certain technologies etc.) (1-nobody listened to my suggestions, 5-my suggestions were always taken into consideration)	
1-5	Description
5	Everyone during the project was welcome to propose his suggestions and most of the time the decisions taken was a union of the proposals of each team member; plus, everyone was very available to listen my opinion and my suggestions.

Describe the way decisions were made in your project: where there was a single authority that made the decisions and was that authority respecting feedback from other team members, or were you using voting, or consensus had to be reached etc. Also rate (1-our decision process turned to be very bad and degraded the project work, 5-the process was excellent and helped the project work a lot) and describe was that way a good one for your project or not.	
1-5	Description
5	We took decisions all together the most of time. Sometimes on some proposals of someone, if no one was able to provide him a feedback or an opinion, we let him free to decide by himself.

Rate (1- no clear requirements, 5-very clear requirements) and describe how clear the initial requirements were.	
1-5	Description
1	At the beginning of the project the requirements was not very clear because also the customers didn't know very well what they wanted; with a lot of meetings we understood what they want, and then we arrived to define the final requirements with a lot of effort.

Rate (1-no or minor changes, 5-huge changes) and describe the level of requirement changes during the project	
1-5	Description
5	The requirements changed a lot during the project because every week our customers asked us more functionalities to fit more with their needs; by the way, finally we arrived at a common final point and we could be able to define much better what we had to do.

Describe the process you used in the project (waterfall/iterative/prototyping/agile/model driven/test driven …). Why have you selected that particular process? How did it turn out – good or bad?
We used waterfall model for the firsts part of the project (documentation – project plan, design and requirements), and SCRUM for the development phase because we needed a lot of internal interactions to develop a good work.

How much (0-no new things, 5-too many new things) you had to learn new technologies/tools/etc. to be able to do your work in the project? Describe what you had to learn.	
1-5	What you had to learn
4	I learned how to manage a distributed group in a good (I hope) way, how to lead a team and how to integrate the customer needs with the group needs. Plus I learned also how to approach "formal" presentation, like at work ("real" work in real world and not only university one). Then I learned a lot above Quartz scheduler and Apache-Tomcat server, and how integrate a Java engine with a MySQL Database, with a site (HTML, javascript and jQuery). Finally, I learned a lot above other cultures, other countries and other way of think, which is, in my opinion, very important and very nice.

What is your final opinion on distributed software development (not on this DSD course!), given in number from 1 (distributed development is useless) to 5 (distributed development is the best), and why?	
1-5	Why?
5	It permits you to get in contact with other people and other cultures, other countries and so on. Plus, it learn you to think in different ways and manage difficulties that in a local team you never encounter.

What was the influence of your project system architecture on work division and task allocation?
Our system has layered architecture so the division of the roles and the assignment of the tasks were pretty easy. In fact we divided our work in "layers" like the project architecture; each one worked to his own class & code without put his hand in other code and, using git, we could synchronize and divide in a very well way the work. The only thing that caused a little delay was quartz, tomcat and the DB on the VM; when they didn't work properly, we had some problems because we need that instruments for working. By the way, we resolved each problem every time as soon as possible.

What were the experiences in integration of your task(s) with other project parts?
I was fully integrated with all the tasks of the project, because my role required to stay updated with the entire status of the project and with the status of each member of the team. Plus, I developed parts in Java, parts in SQL, I developed the fist jobs of the scheduler so I was involved more or less in every part of the project.

What factors motivated you, and why, for working on your project (and their strength 1-minor, 5-strong motivation)	
Motivating factor	1-5
Good experience	5
Learn how to manage a distributed team	5
Learn how to manage a local team	5
Learn how to work all together in a distributed team	5
Lear how to present in front of someone my work in English	3
Improve my skills	4
Improve the quality of my English	3
Work on a real project	5
Talk with structural engineers and reach agreement above the product	4
Develop a project which is the first to fit with European and Italian directives on structural engineering	5

What factors demotivated you, and why, from working on your project (and their strength 1-minor, 5-strong demotivation)	
Demotivating factor	1-5
I was afraid to take bad decisions	4
I was afraid to lead the group in a bad way	4
I was afraid to do bad presentations	1
I was afraid to talk in a bad way (my English was not very good)	3
I was afraid to not be enough skilled	3
I was afraid to be too much dictatorial or not very friendly	4

Analyze the differences between predicted and actually invested work hours on the project. What caused the difference (if there was a difference)?
I spent a lot of hours in leading the group, explaining them what the customers wanted and trying to do my best to realize a good work; I spent a lot of hours also due to changes in requirements than I expected before start the course.

What would you do differently if you were to participate in another distributed project (based on your experience from this project)?
Probably I will take different decisions in trying to satisfy the customers desires; then now I know (more or less) how to lead a group so I will start in a faster way. This experience is the best I have until now; I learned a lot, I met other people, I talk with "real" customers and I was under control of "real" supervisors; it is like a real work experience. Plus, this course was very clear, with defined deadlines and with detailed guidelines, so it was a very good course.

Cultural differences

How would you describe cultural differences you have observed (choose from: *no differences/low/medium/high*)?	low

Describe cultural differences have you observed and rate their impact on project work with a number 0-5 (0-no impact on project work, 5-high impact)		
Difference	Description	0-5
Approach and precision in work	More formal approaches versus more informal ones. Different precision level in doing the work and respecting deadlines.	2
Work schedule	Difference in scheduling the work during the day and the week; someone prefers working all night long, someone else prefers working during the day.	2
Language	Obviously we have different languages from our country and sometimes we used some speech from our natural language (to have some kind of funny exchange), but for the rest we used to speak English and we had no relevant problem in using it.	1

For project and team leaders only

Describe your experience regarding high level team coordination (task assignment, task synchronization, communication with team members, coordination with remote team, etc.)

It was a very huge task for me and, in the first time, I had also some problem in managing all; I felt huge responsibilities on me, because a lot of time I was in charge to remember (and fix) important deadlines, lead the meetings, manage the group.
I was afraid to make some mistake and to make the project fail.
This role took me a lot of effort and I spent not a lot of time in developing code; by the way I'm very happy to have done this role because I acquired a very huge skill and I learned a lot in managing a group and a team.

Risk assessment - have you foreseen all risks that happened during the project, how did you handle them, which risks you have not planned for, what was their impact on project schedule, product quality, etc?

I didn't planned the risks in gather requirements from customers, in the sense that I didn't expect that they continuously change during the project; we spent a lot of effort and hours to handle this risk and this had a huge impact on project schedule and effort.
We changed a lot of times the structure of our product and of our DB (which is very huge); in my opinion, with less changes we had a more strong DB with more performance; plus, we had more controls and less difficulties in coding the structural calculations (we received the last calculations after 2 months 'till the project starts).
It is not a real fault of the customers; I have to say that this calculations are new and they spent a lot of time for defining them in a comprehensible way (with some logic, obviously) and that no one uses NTC 08 and EU 305/2011 laws in this way before (this is another thing I didn't know before and that I could not foreseen).

How much time (in %) was spent on different project phases (requirements gathering, design, development, testing, documenting etc.), why?		
Project phase	Time (%)	Why
Project planning	5	It was really easy reach an agreement with the rest of the group in planning the deadlines and the way to proceed in the various phases of the project because our brainstorming were really helpful and full of interactions.
Requirements gathering	30	We spent a lot of time in gather the requirements because we had to conform to NTC 08 and 305/2011 laws for structural calculations and, since it is a very new thing, also the customers had to prepare the calculations, the data and to decide what they want. Sometimes they changed their mind and sometimes they asked more things to our project so we spent a huge effort in this phase.
Design	20	It was very dependent from the requirements gathering phase, so we spent ½ of the time of the entire project in gather the requirements and changing the design and the architecture of the project. Luckily, we had since from the first draft of the architecture the idea to divide all the things in layers, so when we changed something, we had to change only few layers and not the whole architecture each time
Development	25	We spent ¼ of the time in developing the system and the code because we had very huge calculations; then it was the first time we interface with tomcat or with web services, so we spent also some time to learn how and what we have to do
Testing	10	We didn't spend a lot of time in testing the system in a formal way because we had not a lot of time and also because, during the implementation, we use in a real way the system so we found bug in an "informal" way, using the site.
Documenting	10	Documentation is very important in my opinion, and we tried to document all the things in the best way we could using less time possible (because we had not a lot of time, after the problem in requirement gathering phase).I think that the documentation is complete and very useful to analyze our system (and also for use and install it)
TOTAL	100 %	

Speaker's Corner

Answers to questions we have not posed. Feel free to write about anything you find important, but haven't had a chance to do it in answers to previous questions!
I am very happy for this project; I learned a lot and I went also in Sweden to held the final presentation. I met a lot of very nice people, from which I had learned also a lot, with which I worked well and with I have also some fun during the work.   Our group was truly united and cohesive, and everyone had always the smile during the work.   Plus, we worked very hard and everyone was willing to lend a helping hand to others.