Group 01 Transcript

Test group, student experiment

All participants are male

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| Respondent | Text |
|  | First recording 121:23 |
| 0:00:01.4  PERSON 1 | Test, alright it’s working I guess |
| 0:00:05.1  PERSON 2 | Yeah? |
| 0:00:05.7  PERSON 1 | So we have to speak clearly |
| 0:00:08.5  PERSON 2 | Yeah we are group 1 by the way, we are yeah, [Person 2]- |
| 0:00:12.0  PERSON 1 | [Person 2], yeah |
| 0:00:12.6  PERSON 2 | [Person 3]- |
| 0:00:14.6  PERSON 3 | Yes |
| 0:00:15.1  PERSON 2 | And [Person 1] |
| 0:00:16.0  PERSON 3 | Yes yes |
| 0:00:18.2  PERSON 1 | Okay so- |
| 0:00:18.7  PERSON 2 | Yeah |
| 0:00:20.8  PERSON 1 | For the assignment we have a list of three views to make, viewpoints. The context, functional and information, which can all consist of multiple views. |
| 0:00:31.4  PERSON 3 | Mhm |
| 0:00:33.5  PERSON 1 | And the system is traffic simulation system. [Person 3], you marked some of the- |
| 0:00:39.9  PERSON 3 | Yeah |
| 0:00:40.4  PERSON 1 | Things from the assignment |
| 0:00:40.9  PERSON 3 | Yeah. Yes. So the students should be able to create a visual map of an area and they can make the- should be able to lay out roads in a pattern of their choosing. They should be able to make at least six different- |
| 0:01:00.1  PERSON 2 | Intersections? |
| 0:01:00.7  PERSON 3 | Intersections, yeah. |
| 0:01:03.1  PERSON 2 | Are they cross linked together? |
| 0:01:05.4  PERSON 1 | They are all related so- |
| 0:01:07.5  PERSON 2 | Yeah |
| 0:01:08.2  PERSON 1 | The simulation should simulate all the intersections and their- |
| 0:01:10.9  PERSON 2 | Yeah, combined. |
| 0:01:12.0  PERSON 1 | Interaction yes. |
| 0:01:14.1  PERSON 3 | And additionally, the program should allow students to describe the behavior of traffic lights at each of the intersections. |
| 0:01:22.2  PERSON 1 | And also the busyness of the roads. |
| 0:01:25.3  PERSON 3 | Yeah |
| 0:01:25.9  PERSON 2 | Yeah so- |
| 0:01:26.5  PERSON 1 | Should be defined yeah. |
| 0:01:27.0  PERSON 2 | Only for cars. |
| 0:01:28.9  PERSON 1 | Yeah it’s just- |
| 0:01:29.1  PERSON 2 | Right |
| 0:01:29.1  PERSON 1 | for cars, it’s also just crossroads, so not the intersections and other- |
| 0:01:36.7  PERSON 2 | Yeah |
| 0:01:37.5  PERSON 1 | Just crossroads. |
| 0:01:39.4  PERSON 2 | So one car can go left, right and goes straight forward |
| 0:01:42.8  PERSON 1 | Yeah yeah. Yes. |
| 0:01:45.9  PERSON 2 | And cannot change- pass to- |
| 0:01:49.9  PERSON 1 | Yes I think they should- yes |
| 0:01:53.3  PERSON 2 | Yeah, I suppose |
| 0:01:54.1  PERSON 1 | Or maybe that’s a choice |
| 0:01:55.4  PERSON 3 | Mhm |
| 0:01:55.8  PERSON 2 | Yeah, yeah a design choice |
| 0:01:57.9  PERSON 1 | Right that’s an assumption- Well let’s- Do we wanna play cards- |
| 0:02:03.9  PERSON 3 | mmm |
| 0:02:03.9  PERSON 1 | Cause a few- |
| 0:02:04.2  PERSON 2 | Not, not yet |
| 0:02:05.4  PERSON 1 | Alright |
| 0:02:05.9  PERSON 2 | We’ll wait for two, three more minutes |
| 0:02:07.4  PERSON 1 | And it would be confusing, but are we going to start with the context maybe? Or the system. |
| 0:02:15.0  PERSON 2 | Yeah, that’s a good point- |
| 0:02:16.8  PERSON 1 | Maybe we - |
| 0:02:16.8  PERSON 2 | To start with |
| 0:02:18.0  PERSON 1 | We can start writing down stakeholders just to, to- because I think the context is the most abstract- |
| 0:02:24.6  PERSON 2 | Yeah |
| 0:02:25.4  PERSON 1 | view type. So if we start with the context we can get an idea of- |
| 0:02:30.3  PERSON 2 | Yeah later we can focus on the information view for example |
| 0:02:32.6  PERSON 1 | Yeah exactly yeah |
| 0:02:34.2  PERSON 3 | Mhm |
| 0:02:34.6  PERSON 2 | Yeah good point |
| 0:02:36.4  PERSON 1 | So are we going to make a stakeholder view or something? |
| 0:02:41.0  PERSON 2 | Yeah the external view |
| 0:02:46.9  PERSON 1 | So what should be included. |
| 0:02:51.9  PERSON 3 | Well it’s a program for students, so maybe the students. |
| 0:02:56.3  PERSON 2 | Yeah students, professor, or senior, editors? |
| 0:03:01.1  PERSON 1 | [Person 3] is going to write on the whiteboard. |
| 0:03:03.9  PERSON 2 | Yeah that’s for the context view |
| 0:03:06.6  PERSON 1 | For the context view yes |
| 0:03:14.5  PERSON 3 | Context view, stakeholders, you have students |
| 0:03:28.9  PERSON 1 | Teacher |
| 0:03:29.9  PERSON 2 | Yeah the teacher, or the professor |
| 0:03:32.0  PERSON 1 | Professor, is professor E. |
| 0:03:33.4  PERSON 2 | Yeah, professor E. |
| 0:03:34.0  PERSON 1 | I think yeah. |
| 0:03:37.9  PERSON 3 | Professor E. Development team |
| 0:03:42.8  PERSON 1 | Right |
| 0:03:43.9  PERSON 2 | Yeah so for engineers, yeah |
| 0:03:47.0  PERSON 1 | Developers that’s not complicated |
| 0:03:50.3  PERSON 2 | Yeah |
| 0:03:56.9  PERSON 3 | Well maybe people in traffic [inaudible] |
| 0:04:02.6  PERSON 1 | Well I think it’s just a learning tool, so it’s not actually involved in the creation of [inaudible] roads. |
| 0:04:11.5  PERSON 3 | Ok |
| 0:04:12.0  PERSON 1 | It’s just to understand the interaction of traffic lights and- |
| 0:04:16.0  PERSON 3 | Yeah |
| 0:04:21.9  PERSON 2 | Yeah, I don’t know. Now we have stakeholders, and what’s the second, students. Professor E and developers |
| 0:04:28.4  PERSON 3 | Professor E and developers. |
| 0:04:30.7  PERSON 1 | So- |
| 0:04:31.5  PERSON 2 | Those four points |
| 0:04:32.7  PERSON 1 | Are there other elements besides stakeholders which you want to include in this model? |
| 0:04:39.9  PERSON 3 | Traffic rules? |
| 0:04:41.3  PERSON 2 | Yeah |
| 0:04:41.9  PERSON 1 | Traffic rules? |
| 0:04:42.3  PERSON 2 | Yeah |
| 0:04:42.9  PERSON 3 | That’s definitely |
| 0:04:48.2  PERSON 2 | And are the roads, on lane or two lanes, three lanes, four lanes |
| 0:04:53.4  PERSON 1 | Yes but I think that’s a mechanic inside of the program |
| 0:04:56.8  PERSON 2 | Ok |
| 0:04:57.2  PERSON 1 | So the traffic rules are an external entity. So that’s good, and maybe- |
| 0:05:03.0  PERSON 3 | How yeah, how the, what’s it called, traffic light work. |
| 0:05:09.6  PERSON 2 | Yeah |
| 0:05:10.1  PERSON 3 | Sequencing? |
| 0:05:11.1  PERSON 1 | Yeah |
| 0:05:11.1  PERSON 2 | Yeah that’s |
| 0:05:12.4  PERSON 1 | But that’s also figurable within the- |
| 0:05:14.3  PERSON 2 | Yeah |
| 0:05:15.5  PERSON 1 | Within the software itself. |
| 0:05:18.8  PERSON 2 | Yeah, sensors, measures, how much- |
| 0:05:20.9  PERSON 1 | Yeah |
| 0:05:20.9  PERSON 2 | Cars are on one lane |
| 0:05:22.1  PERSON 1 | Optimal sensor, but that’s all inside the package so- |
| 0:05:24.5  PERSON 2 | Yeah |
| 0:05:25.1  PERSON 1 | So if you look outside- |
| 0:05:25.6  PERSON 2 | Outside the software |
| 0:05:26.6  PERSON 1 | Yeah, maybe behaviours, I’m not sure that’s, or- |
| 0:05:31.0  PERSON 3 | Mhm |
| 0:05:31.7  PERSON 2 | For cars? |
| 0:05:32.4  PERSON 1 | For the cars? |
| 0:05:33.1  PERSON 2 | Yeah |
| 0:05:34.0  PERSON 1 | I guess that’s also, that’s programmed inside the software so- |
| 0:05:37.6  PERSON 3 | Yeah |
| 0:05:39.3  PERSON 2 | Yeah |
| 0:05:46.1  PERSON 1 | Maybe you can put that between brackets |
| 0:05:49.4  PERSON 2 | Yeah. So now we have traffic view, or traffic rules and car behaviour |
| 0:05:54.1  PERSON 3 | Yes. Maybe the requirements, for the systems. Yeah, they’ve got a context view |
| 0:06:05.9  PERSON 1 | So, students must be able to describe the behaviours. |
| 0:06:15.0  PERSON 2 | Yeah |
| 0:06:15.0  PERSON 3 | Yeah |
| 0:06:15.0  PERSON 1 | I’m not sure if that’s an external- |
| 0:06:17.6  PERSON 2 | Yeah |
| 0:06:18.2  PERSON 1 | Thing. Are we going to use external software packages maybe? Plugins, or- |
| 0:06:29.7  PERSON 3 | Yes |
| 0:06:29.9  PERSON 1 | Algorithms |
| 0:06:30.9  PERSON 3 | It says like, you can use a mathematical software program if you want- |
| 0:06:35.3  PERSON 1 | Yeah |
| 0:06:35.8  PERSON 3 | Calculate all the sequencing |
| 0:06:38.0  PERSON 1 | But we- |
| 0:06:38.6  PERSON 2 | Yeah [inaudible]- |
| 0:06:39.5  PERSON 1 | We don’t know what- |
| 0:06:40.5  PERSON 2 | Traffic lights |
| 0:06:41.0  PERSON 1 | We don’t know what we’re gonna use yet so- |
| 0:06:42.4  PERSON 2 | Yeah |
| 0:06:43.0  PERSON 1 | I guess we can just say external- |
| 0:06:44.8  PERSON 2 | Yeah |
| 0:06:44.8  PERSON 1 | Software plugin. And we can fill that in later |
| 0:06:49.2  PERSON 2 | Yeah |
| 0:06:54.4  PERSON 1 | I think that’s almost all for now, for the external stakeholders. Right? |
| 0:06:58.6  PERSON 2 | Ah no, maybe, what’s software developers, what do they need |
| 0:07:05.2  PERSON 3 | The need to receive an architecture and the models |
| 0:07:08.7  PERSON 2 | Yeah so |
| 0:07:09.2  PERSON 3 | Expand and then |
| 0:07:09.7  PERSON 2 | They can code directly in, yeah, one of the programs |
| 0:07:15.9  PERSON 3 | Yes. |
| 0:07:16.4  PERSON 2 | Yeah of- ok. |
| 0:07:22.2  PERSON 1 | Right, anything further? So let’s just start with brainstorming for each model |
| 0:07:30.9  PERSON 2 | Yeah |
| 0:07:31.1  PERSON 1 | For now. |
| 0:07:32.0  PERSON 3 | Yeah |
| 0:07:33.3  PERSON 1 | You can leave that up there, you can look at it later. So for functional, maybe we can just continue brainstorming what functionality the program needs. |
| 0:07:44.6  PERSON 3 | Yeah |
| 0:07:44.6  PERSON 2 | How much traffic can one road handle, or can one crossroad |
| 0:07:50.6  PERSON 3 | You can write down some things- |
| 0:07:53.0  PERSON 1 | Yeah |
| 0:07:53.0  PERSON 3 | Out there. |
| 0:07:53.9  PERSON 1 | So, yeah for functionality you need the road mechanics |
| 0:07:59.7  PERSON 2 | Yeah |
| 0:08:00.4  PERSON 1 | Which- |
| 0:08:00.6  PERSON 2 | If all the lights are green how much traffic can pass the light |
| 0:08:05.0  PERSON 1 | Yeah, the capacity of the road? |
| 0:08:08.0  PERSON 2 | Yeah |
| 0:08:08.6  PERSON 1 | Also, students need to be able to configure the busyness of the roads. |
| 0:08:13.9  PERSON 3 | Mhm |
| 0:08:14.6  PERSON 1 | Those are separate entities I think |
| 0:08:17.9  PERSON 2 | Yeah |
| 0:08:18.0  PERSON 1 | You can have a few cars on a big road or a lot of cars on a small road. |
| 0:08:23.3  PERSON 3 | Yeah so, determine- |
| 0:08:25.6  PERSON 1 | So [inaudible] road down, create visual map and choose pattern? |
| 0:08:30.6  PERSON 3 | Determine busyness traffic |
| 0:08:39.7  PERSON 1 | And also determine size of the road |
| 0:08:42.6  PERSON 3 | Road size |
| 0:08:43.8  PERSON 1 | Road size |
| 0:08:43.9  PERSON 3 | Maybe type, but, more lanes or less lanes |
| 0:08:46.8  PERSON 1 | Yeah |
| 0:08:47.2  PERSON 2 | Yeah |
| 0:08:47.7  PERSON 1 | Yeah that’s- |
| 0:08:48.3  PERSON 2 | Yeah |
| 0:08:48.3  PERSON 1 | One type |
| 0:08:51.0  PERSON 2 | Yeah, how much lane are- |
| 0:08:51.6  PERSON 1 | Also- |
| 0:08:52.1  PERSON 2 | Appropriate, I don’t know |
| 0:08:54.7  PERSON 1 | And every lane has a capacity. Well, appropriate, it’s about playing around with different- |
| 0:09:01.2  PERSON 2 | Yeah |
| 0:09:01.7  PERSON 1 | Types of [inaudible] |
| 0:09:02.3  PERSON 2 | Yeah if one car wants to go straight and one car in front of the car wants to go right or left, and must wait for a signal to go on green lights. Then the car that wants to go to the next traffic light must wait for the car in front of him. Now, if it’s one lane. |
| 0:09:26.6  PERSON 1 | Yeah yeah. So yeah, you should also be able to configure on that crossroad |
| 0:09:31.9  PERSON 2 | Yeah |
| 0:09:31.9  PERSON 1 | You should be able to configure the type of each lane, so for example if you have a road with four lanes you should be able to configure that the left most lane of left only. |
| 0:09:44.3  PERSON 3 | Yeah yeah |
| 0:09:44.3  PERSON 1 | And the outer most lane is right only |
| 0:09:45.8  PERSON 2 | Yeah |
| 0:09:46.3  PERSON 1 | Which should- |
| 0:09:46.7  PERSON 2 | Or- |
| 0:09:47.0  PERSON 1 | Not have a traffic light |
| 0:09:48.0  PERSON 2 | Yeah or turn the car, 100, 360 degrees. |
| 0:09:51.1  PERSON 1 | Yeah but I think in dutch traffic- |
| 0:09:52.8  PERSON 2 | Or [inaudible] |
| 0:09:55.3  PERSON 1 | Rules the, for a turn you just go to the left lane. |
| 0:09:58.0  PERSON 2 | Yeah and then- |
| 0:09:58.1  PERSON 1 | And you make a full eh- |
| 0:09:59.3  PERSON 2 | Yeah |
| 0:09:59.3  PERSON 3 | Yeah |
| 0:10:00.5  PERSON 2 | But it must be, yeah- |
| 0:10:01.2  PERSON 3 | Configureable [inaudible] |
| 0:10:03.0  PERSON 1 | On crossroad- |
| 0:10:04.0  PERSON 3 | Yeah |
| 0:10:04.7  PERSON 1 | Configure lanes and crossroads. |
| 0:10:06.0  PERSON 2 | So, at minimum you need three lanes, one for go forward, one- |
| 0:10:11.0  PERSON 1 | Wait a sec, that’s not true. You can have, if you have one lane, you can have one traffic light for all the- students should be able to do that. Just have an intersection with one lane on both sides, for left, right and- |
| 0:10:26.9  PERSON 2 | Yeah. |
| 0:10:27.5  PERSON 2 | Eh straight. |
| 0:10:27.5  PERSON 2 | Oh, so the other light need to go on red at that moment |
| 0:10:30.8  PERSON 1 | Yes exactly |
| 0:10:31.3  PERSON 2 | Oh ok, yeah it’s possible |
| 0:10:33.9  PERSON 3 | Must work with sensors or without sensors, that detect- |
| 0:10:38.7  PERSON 1 | Yes. I think these all fall under the bigger function, which is crossroad behaviour, or crossroad configuration |
| 0:10:52.9  PERSON 2 | Yeah. But all the intersections have sensors right. |
| 0:10:58.2  PERSON 1 | No you- |
| 0:10:58.4  PERSON 3 | Yeah |
| 0:10:58.4  PERSON 1 | Can choose whether or not they have car sensors or not and that should in turn- or act behaviour of the traffic lights. That’s requirement three I think |
| 0:11:10.8  PERSON 2 | But why would we choose to use roads without sensors. It’s- |
| 0:11:17.6  PERSON 1 | It’s not a choice by us. It’s a choice by the student |
| 0:11:21.5  PERSON 2 | Oh ok |
| 0:11:22.1  PERSON 1 | You should just give them the sandbox and they should be able to play, so that’s one functionality. Let’s see, so we have for the roads, the capacity and the busyness. We all already have that. For the crossroads we have the lanes, the sensors, the light behaviour and the light, maybe light direction. |
| 0:11:51.6  PERSON 2 | Mhm |
| 0:11:51.9  PERSON 3 | Yeah |
| 0:11:53.1  PERSON 2 | So, light behaviour is how long each light- |
| 0:11:58.9  PERSON 1 | Yes |
| 0:11:59.5  PERSON 2 | Is on or off, or red, orange and green |
| 0:12:03.1  PERSON 1 | Yeah, I think because the program should be simple that the students should only have a couple of parameters to configure. So- |
| 0:12:14.1  PERSON 3 | This depends on the sensors or on other- |
| 0:12:18.9  PERSON 1 | Yes and also it says as a requirement, combinations of individual signals that would result in crashes should not be allowed. So for example, a student cannot say, this traffic light straight on is green, while the opposite side left is green. Because that would result in crashes. |
| 0:12:41.9  PERSON 3 | Constraint |
| 0:12:42.0  PERSON 1 | That’s a constraint yeah. |
| 0:12:42.8  PERSON 3 | No crashes |
| 0:12:46.9  PERSON 1 | So I think we should limit the light behaviour in a- |
| 0:12:51.4  PERSON 2 | Yeah, in such a way that- |
| 0:12:52.4  PERSON 1 | Yeah |
| 0:12:52.8  PERSON 2 | Crashes eh |
| 0:12:54.5  PERSON 1 | Yeah exactly, and they should definitely be bale to play with the timing of- |
| 0:12:59.4  PERSON 3 | Mhm |
| 0:12:59.5  PERSON 1 | Of green, yellow and red lights. So timing configuration is definitely a function |
| 0:13:16.7  PERSON 3 | Right |
| 0:13:26.4  PERSON 1 | Yeah so the sensors affect the traffic light behaviour |
| 0:13:32.6  PERSON 3 | And |
| 0:13:32.6  PERSON 2 | Yeah |
| 0:13:33.7  PERSON 3 | Does it also, maybe the busyness will also influence the light behaviour. |
| 0:13:39.9  PERSON 2 | Yeah or the time at that moment, so at night other group, the most busy roads are in green. |
| 0:13:49.7  PERSON 1 | Yeah yeah |
| 0:13:50.0  PERSON 2 | Al the time, except if some car |
| 0:13:53.2  PERSON 1 | Well, do we want to integrate time, maybe we- |
| 0:13:55.2  PERSON 3 | Yeah |
| 0:13:55.6  PERSON 1 | We would just say the student can determine the busyness by himself for every road and just leave timing out- |
| 0:14:04.0  PERSON 2 | Yeah |
| 0:14:04.0  PERSON 1 | Because that would complicate the system I think |
| 0:14:06.2  PERSON 2 | We have fifty seconds left before we start with the game |
| 0:14:10.2  PERSON 3 | I’m gonna write down time question |
| 0:14:15.8  PERSON 2 | So what we have for this moment, we have the context view |
| 0:14:20.2  PERSON 3 | Yeah and this is functional |
| 0:14:23.5  PERSON 2 | And the functional view |
| 0:14:26.4  PERSON 1 | So let’s play the card game for these views we have now |
| 0:14:32.4  PERSON 2 | Yeah |
| 0:14:33.3  PERSON 1 | [Person 3] if you’ll join us |
| 0:14:34.3  PERSON 3 | Yes |
| 0:14:37.2  PERSON 1 | Right so, we’re now playing the card game in the first section. It’s fifteen minutes in. |
| 0:14:45.6  PERSON 2 | Yeah, and a maximum of five minutes |
| 0:14:52.1  PERSON 1 | Yes, so we have five minutes to play the card game. [Person 3]- |
| 0:14:56.2  PERSON 3 | yeah |
| 0:14:56.6 PERSON 1 | Will you start |
| 0:15:01.3  PERSON 3 | Yeah. Let’s see, what do I want to play. |
| 0:15:09.7  PERSON 2 | Yeah, just take your time. |
| 0:15:26.0  PERSON 3 | Yeah. I- |
| 0:15:28.6  PERSON 2 | Yeah, it’s difficult to choose which card is appropriate |
| 0:15:34.2  PERSON 1 | Do you see any problems, or maybe, any contextual things? |
| 0:15:42.6  PERSON 3 | Yeah. I mean, we have to make a lot of assumptions. |
| 0:15:51.6  PERSON 1 | Ok, [Person 3] just played the context card, and the assumption card |
| 0:15:54.0  PERSON 3 | Determine how the student wants to control the system. Since we have not spoken to any students that are gonna use it. We have investigated what is the best way to determine who – how to set up a traffic light |
| 0:16:09.7  PERSON 1 | So that’s basically also a problem. |
| 0:16:12.5  PERSON 3 | Yeah |
| 0:16:12.8  PERSON 1 | That you mention |
| 0:16:15.3  PERSON 2 | Yeah |
| 0:16:15.5  PERSON 1 | Because we don’t know what- |
| 0:16:16.8  PERSON 3 | Yeah |
| 0:16:16.8  PERSON 1 | The students want. What kind of interface, is that what you mean? |
| 0:16:20.3  PERSON 3 | Yeah so |
| 0:16:21.0  PERSON 1 | Ok |
| 0:16:24.7  PERSON 3 | I think we might have to- |
| 0:16:25.7  PERSON 1 | It’s also a risk [laugh] |
| 0:16:27.9  PERSON 3 | A risk that [inaudible] |
| 0:16:28.8  PERSON 1 | Since, yeah, we don’t really know, we’re just guessing what requirements they want. Well, there are a few requirements, but those are just by the professor, I think. |
| 0:16:40.7  PERSON 3 | So I think we’re gonna have to be very abstract in our solution. Because we don’t really know enough to go- |
| 0:16:48.4  PERSON 1 | Yeah |
| 0:16:49.3  PERSON 3 | Very deep |
| 0:16:50.3  PERSON 1 | But on the other hand we should define the system for the architects to create it. |
| 0:16:55.9  PERSON 3 | Yeah |
| 0:16:55.9  PERSON 1 | So we can’t be too abstract |
| 0:16:57.6  PERSON 3 | No |
| 0:16:59.6  PERSON 1 | We should at least get an understanding, but as for these views, is there anything that we need resolved or how are we going to resolve these issues. Are we going to specify the requirements more by ourselves, or- |
| 0:17:22.8  PERSON 2 | Yeah, how much traffic at maximum each crossroad, what is the maximum car capacity |
| 0:17:33.1  PERSON 3 | Yes, well that should. |
| 0:17:34.8  PERSON 1 | I’m not sure, that’s not really related to these requirements right? |
| 0:17:39.3  PERSON 2 | Yeah. Yeah I don’t know for sure. It’s not- yeah. |
| 0:17:45.1  PERSON 3 | Well the students should be able to [inaudible] the traffic density themselves. But we will have to determine how they’re gonna do that. |
| 0:17:58.7  PERSON 1 | Yeah |
| 0:17:59.1  PERSON 3 | How do they declare, well, I suppose a simple slider will do. |
| 0:18:03.3  PERSON 1 | Yeah yeah exactly, I don’t think that’s really a problem for the students to define this, because you can simply say, every lane has a maximum capacity of, I don’t know, sixty cars per minute- |
| 0:18:16.1  PERSON 3 | Yeah |
| 0:18:16.1  PERSON 2 | Yeah |
| 0:18:17.2  PERSON 1 | While driving. It also has a certain length, and, which you can simply divide by car length to determine busyness of the road. And also you can add additional lanes, and you can determine the busyness yourself |
| 0:18:33.4  PERSON 2 | What about busses. Or other cars on the road. We have not thought about that so it’s- |
| 0:18:41.3  PERSON 1 | That’s not- |
| 0:18:41.4  PERSON 2 | Yeah maybe a constraint or a problem? |
| 0:18:46.1  PERSON 1 | I don’t think it’s a problem, we can just, if we want we can add that, it’s not mentioned in the requirements. So do we want to add busses and other vehicles? |
| 0:18:55.2  PERSON 2 | Yeah that’s- |
| 0:18:56.5  PERSON 3 | I would say no. |
| 0:18:57.9  PERSON 2 | No? |
| 0:18:58.4  PERSON 1 | No? To keep it simple- |
| 0:18:59.7  PERSON 3 | Yeah |
| 0:19:02.2  PERSON 1 | We could, maybe we can put it with a question mark, but I’m not sure if it’s- yeah |
| 0:19:09.6  PERSON 2 | Yeah. It’s a good thing to, yeah |
| 0:19:13.7  PERSON 1 | I don’t think it would be hard to implement because it’s basically a car with a different size |
| 0:19:19.5  PERSON 3 | Different turning ratio maybe and eh- |
| 0:19:22.7  PERSON 2 | Yeah yeah |
| 0:19:23.3  PERSON 3 | We have to, yeah. |
| 0:19:24.9  PERSON 1 | That’s true |
| 0:19:27.1  PERSON 3 | Might have to make bus stops |
| 0:19:28.4  PERSON 2 | And they can |
| 0:19:29.8  PERSON 1 | Well bus stops I don’t think is within the scope. |
| 0:19:32.4  PERSON 3 | Yeah right |
| 0:19:33.4  PERSON 2 | It’s about the traffic- |
| 0:19:34.3  PERSON 3 | What’s the advantage of adding busses or- |
| 0:19:39.4  PERSON 2 | Well, the mean of the length of the cars will increase, so standard cars are four meters long and if busses can also join- |
| 0:19:50.6  PERSON 1 | I don’t think [inaudible] |
| 0:19:50.9  PERSON 2 | On the roads the mean will be much larger, maybe twenty meters. If a lot of busses and longer cars are part of |
| 0:20:01.7  PERSON 1 | But that would also complicate the- |
| 0:20:04.3  PERSON 2 | Yeah, the design of- |
| 0:20:07.2  PERSON 1 | Yeah. Well not really, the configuration by a student, they would also have to specify how much busses are in the- |
| 0:20:15.6  PERSON 2 | Does someone have any cards. |
| 0:20:19.7  PERSON 1 | Well I still have problem and- |
| 0:20:19.7  PERSON 2 | I see we’re now past the five minutes, by now |
| 0:20:22.7  PERSON 1 | Well we can continue for a bit if we think I’s useful but I’m not sure- |
| 0:20:27.5  PERSON 3 | So we’re gonna |
| 0:20:28.3  PERSON 2 | Can we |
| 0:20:28.9  PERSON 1 | So we basically- |
| 0:20:29.8  PERSON 3 | We had a problem that we don’t really understand how this, adjusting this timing scheme is going to work and how- |
| 0:20:42.5  PERSON 2 | Yeah |
| 0:20:42.5  PERSON 3 | How are we gonna set a light behaviour |
| 0:20:44.1  PERSON 2 | Yeah but is it more easy to draw one of the crossroads and then decide which, yeah what kind of risks are involved in every crossroad. Is that a good thing |
| 0:21:01.4  PERSON 1 | Wait, what do you mean what type of risks? |
| 0:21:04.5  PERSON 2 | Before, for example, if one car wants to go to the left, or wants to turn and the other light will also go on- |
| 0:21:14.4  PERSON 1 | Mhm |
| 0:21:15.7  PERSON 2 | [inaudible] wait a moment |
| 0:21:20.8  PERSON 3 | Yes- |
| 0:21:31.5  PERSON 2 | Here. So one car is here, he wants to go, he wants to turn here |
| 0:21:36.8  PERSON 1 | Mhm |
| 0:21:36.8  PERSON 2 | So this is, wants to turn this way. But the light here is also on green so there will be a crash here with two cars |
| 0:21:49.4  PERSON 1 | Yes that’s true, so U-turns should maybe be illegal per definition, do a simple- |
| 0:21:55.2  PERSON 2 | yeah |
| 0:21:55.9  PERSON 1 | Simplify things |
| 0:21:56.5  PERSON 2 | Yeah and- |
| 0:21:57.7  PERSON 1 | Because- |
| 0:21:58.1  PERSON 2 | For example a bus cannot turn on this intersection |
| 0:22:04.1  PERSON 1 | No ok |
| 0:22:04.9  PERSON 2 | Because it’s too long |
| 0:22:05.6  PERSON 1 | So we, I guess we should just say in the traffic rules as well, if you create an intersection it’s possible by default U-turns are allowed but we can make it so that on the intersections they have little signs that say, no U-turns. |
| 0:22:22.1  PERSON 2 | Yeah |
| 0:22:23.4  PERSON 1 | Which would simplify the mechanics of the- |
| 0:22:26.3  PERSON 3 | Yeah but is that going to be a question, I don’t really- |
| 0:22:28.5  PERSON 2 | Understand? |
| 0:22:29.1  PERSON 3 | Yeah |
| 0:22:29.4  PERSON 1 | If there is one lane there’s going to be a crash |
| 0:22:33.4  PERSON 2 | And maybe also if there are two lanes |
| 0:22:34.6  PERSON 3 | One lane? |
| 0:22:36.1  PERSON 2 | Because the other- |
| 0:22:36.3  PERSON 1 | Yeah |
| 0:22:36.5  PERSON 2 | Car wants to go to the left, one [inaudible] lane |
| 0:22:39.5  PERSON 1 | Yeah |
| 0:22:41.1  PERSON 2 | For example, and this car wants to go also to the left, or to the right, and then there will be a car crash. |
| 0:22:45.8  PERSON 1 | But this can also be solved with, you need traffic lights |
| 0:22:50.6  PERSON 3 | What if you still want to go that way, then he’s gonna have a red light, this guy |
| 0:22:55.9  PERSON 2 | No, if both are on green so- |
| 0:22:58.8  PERSON 3 | If I, yeah well, both shouldn’t be on green then, right? If it wants to go that way and he’s on green, you’re gonna have a crash anyway. If one goes straight |
| 0:23:10.0  PERSON 2 | No it’s only for the lights on the right, for [inaudible] |
| 0:23:15.9  PERSON 3 | So this light has green light |
| 0:23:17.6  PERSON 2 | Yeah for left |
| 0:23:18.3  PERSON 3 | And he wants to go- |
| 0:23:20.2  PERSON 2 | To the right and also the light is green |
| 0:23:24.0  PERSON 3 | You want to go this way? |
| 0:23:25.1  PERSON 2 | No no |
| 0:23:26.6  PERSON 3 | This way? |
| 0:23:26.6  PERSON 2 | He wants to go, this car wants to go this way, and this car wants to go that way. So the same direction. |
| 0:23:35.7  PERSON 3 | Yeah still- |
| 0:23:36.8  PERSON 2 | They’re all this, this way, all to the left. And if this green, this light, the left on is on green and also this one for the right is on green then you will have car crash. |
| 0:23:49.9  PERSON 3 | Yeah |
| 0:23:51.6  PERSON 2 | Yeah so that’s, yeah, a risk |
| 0:24:02.8  PERSON 1 | But I think this is not really important now, because it’s a very implementation detail. |
| 0:24:08.6  PERSON 2 | Yeah |
| 0:24:10.2  PERSON 1 | You can just say to the developers, just program it so that all traffic light combinations that collide are illegal. That’s really simple |
| 0:24:23.8  PERSON 3 | Yeah |
| 0:24:24.8  PERSON 1 | That’s also one of the requirements. It’s not really an architectural issue. |
| 0:24:28.6  PERSON 2 | Yeah |
| 0:24:29.8  PERSON 1 | So, should we continue with the- |
| 0:24:31.2  PERSON 2 | Yeah |
| 0:24:32.2  PERSON 3 | Yeah |
| 0:24:32.2  PERSON 1 | Maybe with the information view? Just brainstorm again? |
| 0:24:34.5  PERSON 2 | Yeah so the card game |
| 0:24:37.7  PERSON 1 | Let’s leave it for now |
| 0:24:38.6  PERSON 2 | Yeah |
| 0:24:39.0  PERSON 1 | I find it confusing |
| 0:24:41.0  PERSON 3 | Yeah, it is. |
| 0:24:44.9  PERSON 2 | So, the timestamp of removal is, yeah, I’ll write down, twenty-four minutes. For all of your cards. |
| 0:24:54.2  PERSON 1 | Yeah we’re, yeah |
| 0:24:56.1  PERSON 2 | Yeah |
| 0:24:59.2  PERSON 1 | Alright, so the information view. We should really look at what types of information- |
| 0:25:04.6  PERSON 2 | Yeah |
| 0:25:05.0  PERSON 1 | Flows and what entities do you have |
| 0:25:06.3  PERSON 3 | Yeah |
| 0:25:07.4  PERSON 1 | I think the main entities are the area, and the crossroads, and the roads. The area is basically the playing field where you put the roads |
| 0:25:18.0  PERSON 2 | Yeah |
| 0:25:19.1  PERSON 3 | And also, yeah, roads do have properties like, whether they have sensors or not |
| 0:25:26.1  PERSON 2 | Yeah |
| 0:25:28.1  PERSON 3 | I’m gonna write that down |
| 0:25:29.3  PERSON 2 | But do the - |
| 0:25:30.0  PERSON 1 | That’s a property of the crossroads |
| 0:25:31.8  PERSON 2 | Yeah, not the - |
| 0:25:32.3  PERSON 1 | Intersections |
| 0:25:33.0  PERSON 2 | Yeah not of the road in itself. Or yeah. |
| 0:25:39.8  PERSON 3 | So you can say it’s, well give intersections |
| 0:25:41.2  PERSON 1 | Yeah yeah I would say intersections |
| 0:25:43.5  PERSON 2 | Yeah |
| 0:25:44.7  PERSON 3 | Here we are. We have the |
| 0:25:47.1  PERSON 1 | [Person 3] is writing on the whiteboard, intersection |
| 0:25:49.7  PERSON 2 | Yeah for the information view |
| 0:25:51.9  PERSON 3 | And we have the roads |
| 0:25:56.9  PERSON 1 | Intersection- |
| 0:25:56.9  PERSON 3 | Intersection has, this, actually [inaudible] the traffic lights, and it has sensors, could have sensors |
| 0:26:15.8  PERSON 1 | Yeah, sensors optional, traffic lights, it has four roads connected. And all those roads also have the road sizes which affect the amount of traffic lights |
| 0:26:38.8  PERSON 2 | Yeah |
| 0:26:38.9  PERSON 1 | Right? |
| 0:26:39.5  PERSON 3 | So, roads have, connect intersections, size |
| 0:26:54.4  PERSON 1 | And maybe a type, if we want to- do we want to integrate maybe, merging lanes, for example if you have a four lane road and you want to go to a two-way road, or the other way around, or we just want to say if you make a road with four lanes it’s like that all across the board. |
| 0:27:12.0  PERSON 3 | Yeah, type. I don’t know, do we want that? We might |
| 0:27:23.5  PERSON 1 | Maybe put it between brackets again? |
| 0:27:25.5  PERSON 3 | Yeah |
| 0:27:27.5  PERSON 2 | The [inaudible] type |
| 0:27:29.6  PERSON 3 | So these are linked |
| 0:27:32.8  PERSON 2 | And that are connected roads? |
| 0:27:36.1  PERSON 3 | Connected intersections |
| 0:27:37.5  PERSON 2 | Ok. And the type of- |
| 0:27:43.7  PERSON 1 | We also have actual input from students |
| 0:27:49.5  PERSON 3 | Yeah ok yeah |
| 0:27:49.9  PERSON 1 | Who set the timing schemes for the traffic lights. And maybe, yeah so, I think traffic lights should be separate objects, right |
| 0:28:00.0  PERSON 3 | Yeah, intersection on traffic lights yes, which could also be [inaudible] |
| 0:28:06.4  PERSON 1 | Because you should be able to configure per traffic light- |
| 0:28:09.8  PERSON 3 | [inaudible] situation. Ok. Traffic lights have a timing scheme. |
| 0:28:27.1  PERSON 2 | Yeah, or have sensors, so they automatically do that |
| 0:28:32.1  PERSON 3 | Yes but, part of the timing scheme- |
| 0:28:33.6  PERSON 2 | Oh ok |
| 0:28:34.1  PERSON 3 | Yes? And they also have an intersection. |
| 0:28:37.4  PERSON 1 | Yeah and they connect with all the other traffic lights on the intersection, right? |
| 0:28:43.6  PERSON 3 | Right, yeah |
| 0:28:43.9  PERSON 1 | Because they should be able to communicate |
| 0:28:53.4  PERSON 3 | This way |
| 0:28:54.1  PERSON 1 | Yeah, and the area maybe has some general settings like, busyness or are we going to set the busyness per road |
| 0:29:09.5  PERSON 2 | Poeh, yeah |
| 0:29:09.9  PERSON 3 | Well if you have a traffic flow, you can start in the left area and come- might move to the right, but that seems more efficient then just selecting one road with busyness. The flow of traffic |
| 0:29:22.0  PERSON 1 | Yeah, the point is if you, for example, if you have a map with all roads, are you going to say, a lot of cars start here? On this road, and they just randomly scatter across the board |
| 0:29:33.1  PERSON 2 | Yeah |
| 0:29:33.6  PERSON 1 | Or are you going to say, for the entire area it’s, for example, high noon and everyone’s leaving for work, so the busyness is high. And on all the roads, from all sides are a lot of cars- |
| 0:29:46.2  PERSON 2 | Yeah |
| 0:29:46.2  PERSON 1 | Spawning |
| 0:29:47.6  PERSON 2 | Yeah, randomly |
| 0:29:48.4  PERSON 1 | Or going |
| 0:29:48.6  PERSON 3 | Or both |
| 0:29:50.9  PERSON 1 | What? |
| 0:29:52.0  PERSON 3 | Can’t we do both? |
| 0:29:54.4  PERSON 2 | Yeah, it depends on the simulation |
| 0:29:56.3  PERSON 1 | Well maybe you could say the only variable for a road is the size so how much lanes it is, and that also determines the amount of cars that spawn on it, depending on the time of day. So for example if you have a six lane- |
| 0:30:13.6  PERSON 3 | Yeah |
| 0:30:16.1  PERSON 1 | Road. With low busyness there are still a couple of cars going through every second |
| 0:30:23.4  PERSON 3 | Sure though, we have busyness for an area, but the busyness on the road depends on the size of the road |
| 0:30:29.2  PERSON 1 | The size yes, I think that’s a good design decision. |
| 0:30:34.5  PERSON 3 | Do you agree with it? |
| 0:30:36.1  PERSON 2 | Yeah |
| 0:30:36.8  PERSON 3 | And? |
| 0:30:37.7  PERSON 1 | yeah |
| 0:30:38.2  PERSON 3 | If you can’t read, just say it |
| 0:30:43.0  PERSON 2 | So, size and |
| 0:30:47.8  PERSON 1 | The busyness for the area |
| 0:30:48.9  PERSON 2 | Oh are connected |
| 0:30:49.3  PERSON 3 | [inaudible] yeah |
| 0:30:50.3  PERSON 2 | Yeah ok, yeah for the information view |
| 0:30:57.5  PERSON 1 | Alright. Also a road has a length, you can have different road lengths. Or do we want to make the road in sections. |
| 0:31:14.2  PERSON 3 | Sections. |
| 0:31:15.3  PERSON 2 | What do you mean by sections? |
| 0:31:16.7  PERSON 1 | We could make it so, for example, the area is a grid. |
| 0:31:20.6  PERSON 3 | Mhm |
| 0:31:20.7  PERSON 1 | And every road is either a horizontal tile or a vertical tile, and every intersection is just, well an intersection tile |
| 0:31:28.8  PERSON 3 | Mhm |
| 0:31:31.1  PERSON 1 | That would make it easy for the programmers to create the program. |
| 0:31:36.8  PERSON 3 | Yeah I think |
| 0:31:38.3  PERSON 2 | But do we just have to decide if it’s horizontal, or a box with six intersections combined? |
| 0:31:48.0  PERSON 1 | What do you mean? |
| 0:31:49.3  PERSON 2 | If you can see it like this. One, two, three, four, five, six, it’s possible that you can also make it like this. And then coupled with another- |
| 0:32:19.4  PERSON 1 | Yes but we do not design the map |
| 0:32:22.4  PERSON 3 | No |
| 0:32:22.4  PERSON 1 | We, the point of the program is that the user designs the map. |
| 0:32:26.0  PERSON 2 | Ok |
| 0:32:26.5  PERSON 1 | So all we have to create is the [inaudible] |
| 0:32:28.0  PERSON 3 | I would say, this is road one, two, three, four |
| 0:32:34.6  PERSON 2 | Etcetera yeah |
| 0:32:36.4  PERSON 3 | yeah |
| 0:32:38.6  PERSON 1 | But is that really important? |
| 0:32:40.8  PERSON 3 | No |
| 0:32:40.9  PERSON 1 | Either this, that’s basically the map design. |
| 0:32:44.1  PERSON 3 | We’re just talking about it so |
| 0:32:45.4  PERSON 1 | Yeah |
| 0:32:45.8  PERSON 2 | Yeah ok, forget that point |
| 0:32:47.6  PERSON 1 | Let’s shut up about it |
| 0:32:48.9  PERSON 3 | So that’s a road, one length |
| 0:32:51.6  PERSON 1 | Yeah, or are we going with the tile approach? |
| 0:32:57.3  PERSON 3 | I think |
| 0:32:57.6  PERSON 1 | So for example if I can demonstrate. Oh shit. |
| 0:33:06.2  PERSON 3 | [inaudible] |
| 0:33:08.4  PERSON 1 | So if you create the map like a grid, so for example, you just have a basic grid. And all the squares are tiles. You could say you have a toolbox window with like, you have a vertical road. A horizontal road and an intersection. And maybe a large intersection as well which is for tile, and you can simply drag and drop it to be, for example, here we have an intersection and then you can connect the roads like this. You can connect another road. So you basically drag and drop the map. I think this would create a very intuitive way to- |
| 0:33:53.4  PERSON 2 | Yeah it makes sense. For the developers |
| 0:33:58.7  PERSON 3 | Yeah for the user. |
| 0:33:59.8  PERSON 1 | Yeah, also for the user. I think if we choose and approach like this it really defines the way you work with the objects. So for example, in this case a road wouldn’t have a length but it would just be a tile |
| 0:34:15.1  PERSON 3 | Yeah |
| 0:34:15.5  PERSON 1 | And also in the information view all these objects are tiles. And just in an intersection it would have traffic lights, and maybe you can zoom in on the intersection- |
| 0:34:29.9  PERSON 3 | Mhm |
| 0:34:30.2  PERSON 1 | To see the individual cars go. Right? |
| 0:34:33.5  PERSON 3 | Sure |
| 0:34:33.8  PERSON 1 | Is that a good idea? |
| 0:34:34.6  PERSON 3 | Yeah. And the system will be able to determine how long- |
| 0:34:39.6  PERSON 2 | Each road- |
| 0:34:40.2  PERSON 3 | How far it is from the- intersections are separated from each other |
| 0:34:43.9  PERSON 1 | Yeah for example, if we just say, it would create and simplify that a bit. Limited view of the road. But I don’t think that’s a problem because, we’re not going to- |
| 0:34:53.2  PERSON 3 | [inaudible] one [inaudible ] roads so just- |
| 0:34:55.5  PERSON 1 | Yeah exactly so, the point is that you can see, there are two intersections here and these are busy roads, or whatever, so you can see this road is an issue, and also these intersections are causing trouble. You can just zoom in and you can see the individual cars go to check where the problem is. Where the bottleneck is. I think this would create a good viewpoint. So- So we’re doing that? |
| 0:35:21.4  PERSON 3 | Yeah I - |
| 0:35:22.2  PERSON 2 | Yeah I agree |
| 0:35:25.0  PERSON 1 | Ok, so we’re going with the tile based approach. |
| 0:35:28.2  PERSON 3 | And then we’re gonna have tiles |
| 0:35:31.8  PERSON 1 | Yeah so, all these, the road is a tile. |
| 0:35:36.1  PERSON 3 | Traffic lights are part of a tile. |
| 0:35:39.6  PERSON 1 | Yeah but they’re part of a road right? So- |
| 0:35:42.6  PERSON 3 | They’re all part of an intersection. |
| 0:35:47.2  PERSON 1 | Traffic lights are part of a [inaudible] oh intersections sorry yeah, you’re right. Alright, you already have that so, this is a tile and intersection is a tile as well. And the area is basically a bunch of tiles. |
| 0:36:01.0  PERSON 3 | Yeah |
| 0:36:01.7  PERSON 1 | You can place tiles on the area so, like that |
| 0:36:07.8  PERSON 2 | So area is a tile, a road is a tile |
| 0:36:11.4  PERSON 1 | No area is not a tile, area is basically the board for tiles |
| 0:36:14.5  PERSON 2 | Oh ok. And in area there are intersections, and yeah, roads. |
| 0:36:24.9  PERSON 3 | Yeah |
| 0:36:25.5  PERSON 2 | Ok |
| 0:36:29.2  PERSON 3 | And I suppose we have to do some UML modelling in a minute |
| 0:36:33.7  PERSON 1 | Yeah so I think we have the- |
| 0:36:36.5  PERSON 3 | We should make a petri net [laugh] |
| 0:36:39.5  PERSON 1 | Well we could for the information view [laugh] but this, yeah, let’s carry on with that. We have the basics of each model down. So, we have, we are at- |
| 0:36:54.2  PERSON 2 | Thirty-six minutes |
| 0:36:55.6  PERSON 1 | Thirty-six minutes, in ten minutes we’re going to start with the card game- |
| 0:36:59.4  PERSON 2 | Card game |
| 0:36:59.5  PERSON 1 | Again |
| 0:37:00.0  PERSON 2 | Yeah |
| 0:37:01.2  PERSON 1 | So before that time let’s decide on what types of models we want to make. |
| 0:37:06.1  PERSON 3 | Yeah |
| 0:37:06.1  PERSON 1 | Or views I mean. |
| 0:37:07.4  PERSON 2 | Yeah I have the book with me, for software architecture, so maybe that’s a good way to decide which model |
| 0:37:18.8  PERSON 1 | Yeah I think |
| 0:37:19.7  PERSON 2 | Or which is appropriate, for example, to begin with for the context view. |
| 0:37:27.0  PERSON 3 | Yeah maybe we could |
| 0:37:30.3  PERSON 2 | Yes |
| 0:37:32.2  PERSON 3 | Yeah |
| 0:37:50.0  PERSON 3 | Well the external software packages are really something different from traffic rules and car behaviours so, and- |
| 0:37:56.2  PERSON 1 | Yeah so [inaudible] context view |
| 0:37:58.0  PERSON 3 | How do we include that in one view |
| 0:38:00.5  PERSON 1 | Should I just create a new UML IO? |
| 0:38:03.4  PERSON 3 | Sure |
| 0:38:05.1  PERSON 1 | Because I think the context is really just showing in what context the system exists |
| 0:38:11.6  PERSON 3 | Yeah |
| 0:38:13.0  PERSON 1 | So we have a- |
| 0:38:16.2  PERSON 2 | Now we’re talking about the context view right? |
| 0:38:18.1  PERSON 1 | Yeah. So that’s the traffic simulation system. So you have a few stakeholders- |
| 0:38:36.6  PERSON 3 | Mhm. Maybe we should include like, the cars who prefer to be driving on the right, the most right lane. |
| 0:38:51.3  PERSON 2 | Yeah |
| 0:38:51.9  PERSON 1 | That’s a traffic rule |
| 0:38:53.1  PERSON 2 | Yeah, not on the left side if there are more than two lanes. |
| 0:38:55.4  PERSON 3 | Yeah that’s- |
| 0:38:56.1  PERSON 1 | But those are behaviours right? |
| 0:38:57.2  PERSON 3 | Car behaviours |
| 0:38:58.2  PERSON 2 | Yeah |
| 0:39:01.0  PERSON 1 | So maybe we can include those- |
| 0:39:01.5  PERSON 2 | And if it’s busy then a car- |
| 0:39:04.2  PERSON 1 | Yeah |
| 0:39:04.2  PERSON 2 | Can go to the second lane, or maybe the third lane |
| 0:39:08.0  PERSON 3 | Yeah |
| 0:39:08.2  PERSON 1 | Yeah |
| 0:39:08.6  PERSON 2 | Yeah |
| 0:39:12.4  PERSON 3 | And then we should make, have an assumption that we wanted it to be the most efficient. That we want the car behaviour to be the most efficient as possible, or maybe with random like in the real world, but yeah |
| 0:39:32.0  PERSON 1 | I think it’s not- |
| 0:39:34.7  PERSON 2 | What about pollution for example, what do we [inaudible] |
| 0:39:36.9  PERSON 3 | That’s not [inaudible] |
| 0:39:38.7  PERSON 2 | For example. Or- |
| 0:39:41.7  PERSON 1 | Yeah it |
| 0:39:42.2  PERSON 2 | You want the maximum performance |
| 0:39:43.5  PERSON 1 | Ok |
| 0:39:43.5  PERSON 2 | You know that one car from one intersection to the latest, the six for example- |
| 0:39:49.2  PERSON 3 | Yeah |
| 0:39:49.6  PERSON 2 | Which is the fastest- |
| 0:39:51.1  PERSON 1 | I think we have like, a choice between, do we just want to introduce some randomness in it. Like- |
| 0:39:58.4  PERSON 3 | Yeah, I think we should- |
| 0:39:58.8  PERSON 1 | Or do we want to go for the maximum, most efficient- |
| 0:40:01.3  PERSON 2 | Output. |
| 0:40:02.2  PERSON 1 | Flow- |
| 0:40:02.2  PERSON 2 | Yeah |
| 0:40:03.7  PERSON 1 | Possible flow because- |
| 0:40:04.3  PERSON 2 | [inaudible] rating time |
| 0:40:05.7  PERSON 1 | You’re gonna use the system to try to design something that is theoretically the most efficient way |
| 0:40:11.0  PERSON 2 | Yeah that’s our goals |
| 0:40:12.7  PERSON 3 | Yeah |
| 0:40:13.0  PERSON 1 | Well it’s, I’m not sure if that’s a goal. The goal is to show students what effect the system has on traffic flow. So I think it should definitely be a representation of the real world. |
| 0:40:24.2  PERSON 3 | Right. |
| 0:40:24.5  PERSON 1 | And not a perfect system- |
| 0:40:26.6  PERSON 3 | Well |
| 0:40:26.6  PERSON 1 | Because- |
| 0:40:27.8  PERSON 3 | Yeah that’s the goal, I does not really matter |
| 0:40:30.7  PERSON 2 | Yeah |
| 0:40:31.3  PERSON 1 | It says here, she wants to provide them with software that they can use to play with different traffic signal timing schemes in different scenarios. She anticipates that this will allow her students to learn from practice by seeing first-hand some of the patterns that govern the subject. |
| 0:40:46.6  PERSON 3 | Yeah well |
| 0:40:47.1  PERSON 1 | So it definitely shouldn’t be a perfect system I think. Right? |
| 0:40:53.5  PERSON 3 | Yeah I don’t think it really matters and it just- about seeing the effects because it might not be necessary to to have a really very good representation of the real world. Maybe we can just see, say to the developers, try making an algorithm that looks like the real world, but don’t spend too much time on it because it’s not absolutely necessary to have a real-life simulator game |
| 0:41:29.3  PERSON 2 | Yeah running yeah |
| 0:41:30.4  PERSON 3 | Yeah. So we want some realistic car behaviour, but it’s not a priority if you ask me. |
| 0:41:47.4  PERSON 2 | No it will be a- yeah a mathematical- |
| 0:41:51.8  PERSON 3 | Yeah. But will it be easier to just have perfect flow for a mathematician. Than to create some kind of algorithm |
| 0:42:06.9  PERSON 1 | We keep [inaudible] |
| 0:42:07.7  PERSON 2 | What is the [inaudible] of the road by the way |
| 0:42:09.7  PERSON 1 | What? |
| 0:42:10.2  PERSON 2 | [inaudible] the speed- |
| 0:42:11.1  PERSON 3 | yes |
| 0:42:11.3  PERSON 2 | Is it always at fifty kilometres, and how is the, eh the breaking distance. If the light goes on yellow, can a car can pass by or must it stop if it’s- |
| 0:42:23.1  PERSON 1 | I think the speed is- |
| 0:42:24.5  PERSON 2 | Is fifty |
| 0:42:25.2  PERSON 1 | A property of the road |
| 0:42:27.2  PERSON 3 | Yeah and it’s also configurable |
| 0:42:29.5  PERSON 1 | Yeah exactly so |
| 0:42:30.1  PERSON 3 | [inaudible] breaking that’s eh |
| 0:42:32.5  PERSON 2 | Yeah breaking is- |
| 0:42:32.8  PERSON 3 | That’s a good point |
| 0:42:34.3  PERSON 2 | Especially with busses |
| 0:42:35.3  PERSON 1 | Actually I think that’s related to the speed, you can set [inaudible] |
| 0:42:36.9  PERSON 3 | And also car behaviour |
| 0:42:40.4  PERSON 1 | Yeah |
| 0:42:49.4  PERSON 2 | So yeah two more minutes before we start with the card game |
| 0:42:56.7  PERSON 3 | Yeah and how are we gonna draw a model with these cards, I don’t really |
| 0:43:04.1  PERSON 2 | No it’s, yeah, a way of thinking about different, yeah, context, problems, solution for each view |
| 0:43:14.0  PERSON 3 | Yeah |
| 0:43:14.4  PERSON 2 | Or views that we’re gonna make. But for the context view we have to decide which information or data every stakeholder needs. You know, the professor is the editor so to speak. So yes, and the users of the system |
| 0:43:52.5  PERSON 3 | Professor wants the students to be able to experience- |
| 0:43:56.5  PERSON 2 | No I mean the professor is the supervisor |
| 0:43:58.7  PERSON 3 | Yeah |
| 0:43:59.4  PERSON 2 | So he has all the rights to change patterns or limits, traffic lights for example |
| 0:44:10.7  PERSON 3 | Mhm |
| 0:44:11.9  PERSON 2 | And the other stakeholders have the same permissions |
| 0:44:17.2  PERSON 3 | May- what do you mean with- |
| 0:44:18.5  PERSON 2 | The software |
| 0:44:19.3  PERSON 3 | I think that’s a really interesting view to focus on |
| 0:44:23.1  PERSON 2 | Yeah, and for in the context view. If we look here for example in the book, page 257, you can see here, well multiple databases and they’re all- |
| 0:44:35.2  PERSON 1 | This is what I have right now |
| 0:44:36.8  PERSON 2 | Ok and that’s the- |
| 0:44:37.6  PERSON 3 | I would say, what in the context influences our car behaviour perhaps, it’s a context view |
| 0:44:44.1  PERSON 1 | Yes but I [inaudible] |
| 0:44:44.7  PERSON 3 | [inaudible] |
| 0:44:46.9  PERSON 1 | I’ll make a screenshot as well, I’ll save it in a bit |
| 0:44:49.1  PERSON 2 | Yeah |
| 0:44:50.3  PERSON 1 | So screenshot 1 |
| 0:44:52.7  PERSON 2 | Yeah |
| 0:44:53.3  PERSON 3 | Mhm |
| 0:44:53.3  PERSON 2 | For the context view |
| 0:44:54.4  PERSON 1 | Yeah basically it only shows the stakeholders and traffic rules right now but, let me see, let me save the screenshot. |
| 0:45:03.5  PERSON 2 | Do we have to make a limitations for each stakeholder? What are the limitations for the users, and are there any limitation for the professor? |
| 0:45:11.1  PERSON 3 | We are- we only are allowed to play our cards right now |
| 0:45:16.9  PERSON 2 | Yeah so let’s start- |
| 0:45:18.3  PERSON 1 | I so, oh yeah, so we’re gonna do the card game again |
| 0:45:21.5  PERSON 2 | Yeah so |
| 0:45:26.5  PERSON 3 | So I would say about the solution for our context problem to have car behaviour central in the view. And to basically see what in the context is going to influence the way our car behaves. What would you think about that. |
| 0:45:49.2  PERSON 2 | Can you repeat it? |
| 0:45:50.1  PERSON 3 | So, we have car behaviour in the middle and we look at our context and see what are we going to have to take into account |
| 0:45:57.0  PERSON 1 | You want to make a special context view for the car behaviour? |
| 0:46:00.0  PERSON 3 | Yeah |
| 0:46:01.7  PERSON 2 | Yeah, and- |
| 0:46:02.1  PERSON 3 | They said is- |
| 0:46:02.7  PERSON 2 | for the traffic rules maybe |
| 0:46:04.0  PERSON 1 | Is that really context though, isn’t that internal system behaviour |
| 0:46:12.3  PERSON 3 | Well it is the rules of the real world that we’re going to have to transform |
| 0:46:18.9  PERSON 2 | Yeah. Now we assume it’s- |
| 0:46:21.6  PERSON 1 | [laugh] nice |
| 0:46:22.3  PERSON 2 | It’s a mathematical calculation, you can calculate and change the parameters of car length and waiting time and also the traffic rules. In the software |
| 0:46:37.2  PERSON 3 | Yeah |
| 0:46:37.2  PERSON 2 | Yeah in the simulation software |
| 0:46:38.3  PERSON 3 | Yeah |
| 0:46:39.4  PERSON 1 | But I think there’s basically a fixed set of rules- |
| 0:46:43.0  PERSON 3 | Mhm |
| 0:46:43.5  PERSON 1 | In the real world, the traffic rules and those influence the system so that’s basically what happens in the context view. Right? |
| 0:46:52.9  PERSON 3 | Yeah |
| 0:46:53.1  PERSON 1 | Cause those rules have an effect on the system and for the behaviour itself we can have some of our own rules. But I think those are inside the system. |
| 0:47:07.8  PERSON 3 | Yeah |
| 0:47:09.5  PERSON 1 | Right? So |
| 0:47:11.3  PERSON 3 | But I just think that we’re not gonna have a very interesting context view. |
| 0:47:15.1  PERSON 1 | No that’s true but that’s- |
| 0:47:16.0  PERSON 2 | Yeah [laugh] |
| 0:47:16.5  PERSON 1 | That’s not really a problem because if it’s- if there’s nothing there, then it isn’t there |
| 0:47:20.7  PERSON 3 | Yeah we can’t change anything about it |
| 0:47:24.7  PERSON 2 | So I withdraw my card assumption |
| 0:47:29.5  PERSON 1 | Play my trap card [laugh] |
| 0:47:31.1  PERSON 3 | [laugh] yeah me too |
| 0:47:33.8  PERSON 1 | Ok so, for the other views |
| 0:47:44.3  PERSON 2 | Well functional view and information view. |
| 0:47:52.8  PERSON 3 | Shall we start with our functional view? |
| 0:47:57.6  PERSON 2 | Yeah fine by me |
| 0:48:00.9  PERSON 3 | I think it’s easiest to just use UML or something |
| 0:48:06.3  PERSON 1 | Yeah I think the biggest problem we have right now, playing my problem card- |
| 0:48:11.4  PERSON 2 | Yeah |
| 0:48:11.4  PERSON 1 | Is that we don’t really know- we have a pretty good idea of how we want the application to work |
| 0:48:15.9  PERSON 3 | Yeah |
| 0:48:16.3  PERSON 1 | But we don’t know how we’re going to visualize the architecture which I our main concern at this point. We’re almost halfway through our time |
| 0:48:24.2  PERSON 3 | Yeah |
| 0:48:25.7  PERSON 1 | So we really should start visualizing our- |
| 0:48:29.6  PERSON 3 | I think we should have a module like the builder module, that allows you to place roads, intersections and- |
| 0:48:38.9  PERSON 1 | You should write that down, maybe functional modules. If you make a special section modules, we can start dividing the functions. |
| 0:48:53.0  PERSON 3 | Builder? We have- need to have the timing |
| 0:48:58.9  PERSON 2 | Yeah configurations |
| 0:49:01.1  PERSON 3 | A nice name for it, timing configure, timer? |
| 0:49:06.5  PERSON 1 | Timing theme? |
| 0:49:07.6  PERSON 3 | Timing scheme. That one |
| 0:49:08.5  PERSON 1 | A scheme yeah [inaudible] |
| 0:49:10.7  PERSON 3 | Timing scheme. |
| 0:49:17.8  PERSON 2 | Is that for each crossroad or- |
| 0:49:22.5  PERSON 3 | A timing scheme |
| 0:49:22.5  PERSON 2 | All combined |
| 0:49:26.5  PERSON 3 | I think you’re going to want to adjust your timing scheme on a specific crossroad. I can imagine |
| 0:49:35.3  PERSON 2 | Yeah so every crossroad- |
| 0:49:36.3  PERSON 3 | Maybe |
| 0:49:36.6  PERSON 2 | Has its own timing scheme |
| 0:49:38.5  PERSON 3 | Maybe there is an overall timing scheme and you can use |
| 0:49:43.0  PERSON 1 | What do you mean by that? |
| 0:49:45.0  PERSON 3 | Like I want- |
| 0:49:46.9  PERSON 2 | To travel from crossroad one to crossroad six. Or intersection one to six- |
| 0:49:52.3  PERSON 3 | Yeah |
| 0:49:53.2  PERSON 2 | How long does it take to get there. |
| 0:49:54.7  PERSON 3 | Yeah. Maybe you want an option to say, everything green or I want everything red. |
| 0:50:02.7  PERSON 1 | Well I don’t think they should be able to configure in such depth because that would really mess up the entire logic of all the traffic lights which I think is the point of the application. That they can just play with the timings- |
| 0:50:18.0  PERSON 3 | Yeah |
| 0:50:18.2  PERSON 1 | And how long is the stoplight on red, how long is it on green, and yellow. And that they can simply observe what happens. |
| 0:50:27.6  PERSON 3 | Mhm |
| 0:50:27.9  PERSON 1 | So I don’t think they should be able to override the existing algorithms |
| 0:50:31.0  PERSON 3 | Yeah |
| 0:50:31.5  PERSON 2 | Yeah |
| 0:50:32.0  PERSON 1 | So- |
| 0:50:32.0  PERSON 3 | [inaudible] I say each intersection or each eh- |
| 0:50:35.8  PERSON 1 | I think each intersection should have its separate logic |
| 0:50:39.5  PERSON 3 | Yeah |
| 0:50:39.5  PERSON 2 | Yeah |
| 0:50:40.5  PERSON 3 | So it’s separate timing scheme |
| 0:50:42.6  PERSON 2 | So for at least six times, in our case, because we have six- |
| 0:50:48.3  PERSON 1 | Yeah well |
| 0:50:49.0  PERSON 2 | Intersection |
| 0:50:49.6  PERSON 1 | The number six isn’t really important because the way we build it, it can be one or it can be one-thousand. Depending on the size of the area. But the requirement is at least six- |
| 0:51:02.6  PERSON 3 | We want- |
| 0:51:02.8  PERSON 1 | We’re easily fitting that |
| 0:51:04.9  PERSON 3 | A module- |
| 0:51:04.9  PERSON 2 | Shall I stop the game by the way? |
| 0:51:08.0  PERSON 1 | Huh? |
| 0:51:07.8  PERSON 2 | It’s ok? Or do you have- |
| 0:51:09.7  PERSON 1 | We can continue from here it’s- that’s- |
| 0:51:12.3  PERSON 2 | Yeah? |
| 0:51:16.7  PERSON 3 | Yeah we’re gonna want to have a module to spawn cars, or- |
| 0:51:21.6  PERSON 2 | Yeah randomly or- |
| 0:51:23.5  PERSON 3 | Yeah |
| 0:51:23.5  PERSON 2 | Just by a neighbourhood. |
| 0:51:29.2  PERSON 3 | Yeah |
| 0:51:30.9  PERSON 2 | Or a shopping center for example |
| 0:51:31.5  PERSON 1 | I think, maybe, just to get back to the timing scheme. There shouldn’t be too much else, which is one is the intersection logic and timing scheme is a part of that. And timing scheme I the part the student can change and the logic is the overall algorithm- |
| 0:51:49.3  PERSON 2 | Yeah that’s the base |
| 0:51:50.9  PERSON 1 | Yeah exactly |
| 0:51:52.1  PERSON 2 | Yeah |
| 0:51:52.8  PERSON 1 | So those are two separate modules I think. |
| 0:52:05.0  PERSON 2 | Yeah. So intersection logic, timing scheme, and builder- |
| 0:52:11.7  PERSON 3 | Yeah |
| 0:52:11.7  PERSON 2 | Are the points |
| 0:52:13.4  PERSON 3 | Use interface |
| 0:52:19.0  PERSON 1 | Yeah, the user interface. The- |
| 0:52:26.3  PERSON 3 | Something about the- |
| 0:52:26.3  PERSON 1 | The area interface, the builder interface maybe |
| 0:52:28.7  PERSON 3 | We have the builder |
| 0:52:30.6  PERSON 1 | Oh you have the builder, ok. Intersection logic. |
| 0:52:34.0  PERSON 3 | Something about- |
| 0:52:37.0  PERSON 1 | Car logic. |
| 0:52:38.2  PERSON 3 | Right |
| 0:52:38.9  PERSON 1 | Individual car logic. [burp]. Excuse me [laugh] oops. |
| 0:52:46.8  PERSON 2 | That was [Person 1] by the way |
| 0:52:47.9  PERSON 1 | No no it was [Person 2]. |
| 0:52:51.6  PERSON 3 | Car logic. Does car logic in the- do the spawn maybe. |
| 0:53:01.0  PERSON 1 | No I think every road should have, maybe separate road logic module, and if it’s a road at the edge of the world it’s a spawning road, or something. |
| 0:53:13.9  PERSON 2 | Yeah |
| 0:53:14.1  PERSON 3 | Right |
| 0:53:14.9  PERSON 1 | And in- you can- for every spawner road you can configure how much car is spawned there. Is that an idea? |
| 0:53:20.6  PERSON 2 | Yeah [inaudible] |
| 0:53:20.8  PERSON 3 | Yeah [inaudible] |
| 0:53:21.9  PERSON 2 | Or- |
| 0:53:23.0  PERSON 3 | You said [inaudible] I think it would be best to have it only at sites. Yeah like, well, yeah |
| 0:53:33.0  PERSON 1 | Cars can’t go [inaudible] |
| 0:53:33.6  PERSON 3 | So you can observe the flow a bit better I guess, because if you’re gonna car spawn in the middle of your map then it’s gonna be difficult to track the flow of traffic and see how your actions influence the flow. Does that make sense? |
| 0:53:48.7  PERSON 1 | Yeah so you only configure the busyness of the roads at the sides |
| 0:53:52.5  PERSON 3 | Yeah |
| 0:53:52.5  PERSON 1 | Right? |
| 0:53:53.4  PERSON 3 | Yeah |
| 0:53:54.5  PERSON 1 | That makes sense |
| 0:53:56.0  PERSON 3 | Right. Road logic. |
| 0:54:05.0  PERSON 1 | Road logic, car logic |
| 0:54:12.5  PERSON 3 | Some- if or without sensors, that’s part of the intersection logic. |
| 0:54:15.9  PERSON 1 | Yeah |
| 0:54:18.8  PERSON 3 | We have time- |
| 0:54:20.9  PERSON 1 | I think we can cross out time of day, because we covered that with the road busyness. Right? |
| 0:54:30.4  PERSON 3 | Yeah. And students can choose to have, like, when you [inaudible] at night. And if it is not very busy they can say, I want orange light. |
| 0:54:42.2  PERSON 2 | But then there will be a car crash. If two cars- |
| 0:54:45.7  PERSON 1 | Well |
| 0:54:46.1  PERSON 2 | Came along at the same time |
| 0:54:47.8  PERSON 3 | Yeah right |
| 0:54:48.2  PERSON 1 | Yeah |
| 0:54:48.2  PERSON 2 | So- |
| 0:54:49.1  PERSON 3 | That’s their choice |
| 0:54:50.2  PERSON 1 | Well, I’m not sure if that’s within our scope |
| 0:54:53.2  PERSON 3 | Yeah so then- |
| 0:54:54.3  PERSON 1 | Orange lights with- |
| 0:54:55.7  PERSON 3 | That would be a feature of that night mode perhaps. |
| 0:54:58.9  PERSON 2 | Yeah |
| 0:54:59.1  PERSON 3 | So |
| 0:55:00.7  PERSON 2 | But then the rules change. Because cars can crash at night. That’s the problem I- |
| 0:55:07.5  PERSON 3 | Yeah, it’s just an example of course |
| 0:55:09.1  PERSON 2 | Yeah. Yeah it’s only an example but- |
| 0:55:11.1  PERSON 3 | Yeah |
| 0:55:10.9  PERSON 2 | We have to think about, yeah, that as well. |
| 0:55:14.7  PERSON 3 | Yeah. Cars are not allowed to crash |
| 0:55:17.0  PERSON 2 | [laugh] cars are not allowed to drive at night |
| 0:55:19.8  PERSON 3 | Is a student limited in his options? |
| 0:55:23.4  PERSON 1 | Yeah definitely. |
| 0:55:24.2  PERSON 3 | Ok |
| 0:55:25.3  PERSON 1 | I think we should forget night mode for now because it’s- |
| 0:55:28.5  PERSON 3 | Yeah. And large vehicles. I think- |
| 0:55:30.8  PERSON 1 | Yeah let’s leave it out for a minute |
| 0:55:31.6  PERSON 3 | [inaudible] has a minor effect on the- |
| 0:55:34.2  PERSON 1 | Yeah |
| 0:55:34.2  PERSON 3 | The purpose of this application. Ok. Now we have six modules. How abstract are we gonna make this model |
| 0:55:46.1  PERSON 2 | So which do we have? We have the- |
| 0:55:48.6  PERSON 3 | We have the builder module- |
| 0:55:50.2  PERSON 2 | Yeah |
| 0:55:50.7  PERSON 3 | We have intersection logic [inaudible] with the timing scheme. We have the user interface, we have car logic and road logic. |
| 0:56:08.1  PERSON 2 | And that are the five- |
| 0:56:10.5  PERSON 3 | Yeah |
| 0:56:10.7  PERSON 2 | Points, yeah, in the functional view. |
| 0:56:14.6  PERSON 3 | How abstract are we going to do this. |
| 0:56:17.3  PERSON 1 | I think we should keep it quite abstract. |
| 0:56:19.7  PERSON 3 | Yeah |
| 0:56:20.1  PERSON 1 | If we just have the modules and the main functions as we specified there, of each module. And their interrelations, that’s fine for the functional view, and the same for the information view |
| 0:56:30.6  PERSON 3 | Like a game manager that allows you to save your area and load in new areas? |
| 0:56:37.1  PERSON 1 | Yeah definitely a game manager |
| 0:56:38.6  PERSON 3 | [inaudible] game manager is that a good name? |
| 0:56:40.9  PERSON 1 | Game manager or main, maybe. I think manager is fine, game manager |
| 0:56:46.7  PERSON 3 | Ok. |
| 0:56:53.9  PERSON 2 | I’m going to read the assignment for now. |
| 0:56:58.1  PERSON 1 | I’m going to create a picture of the whiteboard for the record. |
| 0:57:02.6  PERSON 3 | May the record show that we did a very good job |
| 0:57:04.0  PERSON 1 | [laugh] exactly |
| 0:57:06.0  PERSON 2 | Yeah I can make also photos at the end, so, I know recording is- |
| 0:57:11.7  PERSON 1 | [inaudible] camera |
| 0:57:12.1  PERSON 2 | [inaudible] |
| 0:57:12.9  PERSON 3 | If you- then we can wipe this and we can start- |
| 0:57:14.6  PERSON 2 | Yeah |
| 0:57:16.0  PERSON 3 | Like |
| 0:57:16.6  PERSON 1 | Yeah |
| 0:57:17.3  PERSON 2 | Alright yeah, maybe I can use my- |
| 0:57:20.1  PERSON 1 | No |
| 0:57:21.3  PERSON 3 | No |
| 0:57:23.1  PERSON 1 | Ok |
| 0:57:23.6  PERSON 3 | Let’s use [Person 1]’s crappy camera |
| 0:57:28.1  PERSON 1 | [inaudible] |
| 0:57:29.9  PERSON 2 | [inaudible] and saven |
| 0:57:35.2  PERSON 1 | [laugh] selfie. So this is another [inaudible] is readable |
| 0:58:01.1  PERSON 3 | [laugh] I can’t see whether it says blue or not |
| 0:58:03.4  PERSON 2 | Maybe we can set up the rules for how long the lights can go on green, yellow and red. |
| 0:58:09.3  PERSON 1 | Yeah definitely |
| 0:58:10.1  PERSON 2 | That’s for the functional view |
| 0:58:12.1  PERSON 3 | I’m gonna wipe this. |
| 0:58:15.6  PERSON 2 | Do you have the picture [Person 1]? |
| 0:58:16.2  PERSON 1 | Yeah, you can wipe it. |
| 0:58:19.4  PERSON 3 | Well, I’ll keep our modules on it |
| 0:58:20.6  PERSON 1 | Yeah just keep the main things. |
| 0:58:23.4  PERSON 2 | So, for example, the orange light is always like- |
| 0:58:28.6  PERSON 1 | Right |
| 0:58:29.0  PERSON 2 | Fewer than three seconds? |
| 0:58:30.1  PERSON 3 | Why we don’t- |
| 0:58:30.6  PERSON 1 | Maybe you can start with modelling the functional, if you’re going to- |
| 0:58:35.5  PERSON 3 | Yeah |
| 0:58:36.1  PERSON 2 | Yeah |
| 0:58:36.1  PERSON 1 | Cause we need to provide real- |
| 0:58:38.5  PERSON 2 | Yeah that’s for the timing scheme |
| 0:58:39.4  PERSON 1 | We are at the first hour now so- |
| 0:58:40.9  PERSON 2 | Yeah |
| 0:58:41.7  PERSON 3 | So- |
| 0:58:43.8  PERSON 2 | For example, the lights, how long does orange stay on, and red, and green? |
| 0:58:50.5  PERSON 3 | How does architecture [inaudible] look like, cause we have all this [inaudible] of the game and how are they connected. |
| 0:59:00.7  PERSON 2 | Oh all those five [inaudible]? |
| 0:59:02.1  PERSON 3 | Yeah |
| 0:59:02.9  PERSON 2 | Oh ok. So what is the last one? |
| 0:59:07.1  PERSON 3 | Game manager so- |
| 0:59:07.7  PERSON 2 | Game manager |
| 0:59:08.6  PERSON 3 | Yes |
| 0:59:08.6  PERSON 2 | So that’s the one- |
| 0:59:09.7  PERSON 3 | Yeah. The game manager |
| 0:59:10.4  PERSON 2 | And [inaudible] |
| 0:59:12.7  PERSON 3 | Game manager |
| 0:59:14.0  PERSON 2 | Yeah GM |
| 0:59:17.6  PERSON 3 | Game manager- |
| 0:59:20.4  PERSON 2 | Besides- |
| 0:59:21.8  PERSON 3 | The game manager can create, like, a blank area. Or can just load, like a, an area that you have done before. So basically the game manager just creates an instance to play in. |
| 0:59:38.1  PERSON 2 | Yeah. Yeah or with a map |
| 0:59:42.7  PERSON 3 | Yeah. Should be module, the map. |
| 0:59:45.9  PERSON 2 | Yeah |
| 0:59:46.8  PERSON 3 | Current game or something |
| 0:59:49.2  PERSON 2 | Yeah or current simulation or multiple simulations at the same time. |
| 0:59:59.4  PERSON 3 | [inaudible] just- |
| 1:00:13.0  PERSON 2 | But what do they mean with, to allow cars in to flow through the intersection from each direction in a fluid manner. What is a fluid manner? Minimum waiting time? A fluid manner. We have to drive along each light or- |
| 1:00:35.0  PERSON 1 | No, I guess that just means that they- when they can they drive and when they have to they stop. On- |
| 1:00:41.2  PERSON 2 | Yeah of course but- |
| 1:00:42.6  PERSON 3 | Or- are- we reach performance from the program |
| 1:00:45.0  PERSON 2 | Yeah I don’t know what- |
| 1:00:45.8  PERSON 3 | Almost like laying them. So we write from constraint, view with performance |
| 1:00:53.0  PERSON 2 | Yeah, view with performance, yeah, what is view with performance. It depends form which direction a car- |
| 1:01:01.0  PERSON 1 | Yeah |
| 1:01:01.4  PERSON 2 | Came along |
| 1:01:03.0  PERSON 3 | I mean, are we going to- more into [inaudible] just our modules? |
| 1:01:13.7  PERSON 2 | Oh, here is it, it says in an ideal case the amount of time people spend waiting is minimalized by the chosen settings for each- for a given intersection’s traffic light. A minimum- |
| 1:01:28.3  PERSON 1 | Yeah so, but the students should also be able to play with the timing so they can create a less than ideal situation |
| 1:01:39.2  PERSON 2 | Yeah but the goal, the ideal case is, yeah, minimum waiting time. |
| 1:01:48.1  PERSON 1 | Yeah |
| 1:01:51.6  PERSON 2 | Ok. Yeah. They can use to play with the different traffic signal time schemes in different scenarios. So the students can decide by themselves what kind of signal or timing schemes they will use in their models. And it depends on, yeah, the different scenarios. Yeah, depends- |
| 1:02:47.8  PERSON 1 | So- |
| 1:02:47.8  PERSON 2 | If you’re a city or outside of the neighbourhood |
| 1:02:53.1  PERSON 1 | Wait what was the question again? |
| 1:02:55.4  PERSON 2 | Oh, it was not really a question but, yeah, it says here that the students should play by themselves with different traffic timing schemes- |
| 1:03:05.1  PERSON 1 | Mhm |
| 1:03:05.6  PERSON 2 | And scenarios. |
| 1:03:08.1  PERSON 1 | Well, I think that’s intrinsic in our method of using tiles. |
| 1:03:12.4  PERSON 2 | Yeah |
| 1:03:13.7  PERSON 1 | So they can basically create their own cities or whatever |
| 1:03:16.2  PERSON 2 | Yeah |
| 1:03:19.5  PERSON 3 | Ehm roads, roads |
| 1:03:20.0  PERSON 1 | [laugh] [inaudible] |
| 1:03:27.2  PERSON 3 | How do I fit the logic things in this? I just- we have the game manager, game manager can create a new instance from the game and it can be a new and fresh one, or one that was just saved in the game manager. The builder is connected to that, can place things in the area. The user interface has influence on everything. How are we gonna get the logic things? It’s all connected to the instance? |
| 1:04:01.5  PERSON 2 | Yeah it’s a slider, I suppose. The- |
| 1:04:05.0  PERSON 3 | Yeah |
| 1:04:05.0  PERSON 2 | Each student can choose by themselves orange, red, green, how long it must be [inaudible] |
| 1:04:10.8  PERSON 3 | Yeah yeah yeah. But how do we model it. I don’t know if this is a good way but- |
| 1:04:17.8  PERSON 2 | What’s in the middle? |
| 1:04:19.1  PERSON 3 | An instance |
| 1:04:20.0  PERSON 2 | Oh instance |
| 1:04:20.0  PERSON 3 | A specific |
| 1:04:21.4  PERSON 1 | The instance is basically the current game |
| 1:04:23.3  PERSON 3 | Yeah |
| 1:04:24.7  PERSON 2 | Yeah that’s- |
| 1:04:25.3  PERSON 1 | So they place objects in the world |
| 1:04:28.4  PERSON 3 | You can load and save things in the game manager |
| 1:04:34.2  PERSON 1 | I think maybe- |
| 1:04:37.0  PERSON 3 | Is the builder connected to the other logic things? |
| 1:04:41.7  PERSON 1 | I think that the logic is connected to the pieces you place. So- |
| 1:04:45.0  PERSON 2 | Yeah, each intersection and each traffic light |
| 1:04:49.4  PERSON 3 | Yeah but, does the logic become active- |
| 1:04:53.8  PERSON 2 | Immediately |
| 1:04:53.8  PERSON 3 | After it’s placed |
| 1:04:59.9  PERSON 2 | I don’t know. You can- |
| 1:05:00.4  PERSON 3 | Alright then |
| 1:05:00.9  PERSON 2 | [inaudible] the simulation and then add a new intersection and then change the parameters of those intersections and then you can play again with the simulation |
| 1:05:17.3  PERSON 3 | Intersection |
| 1:05:18.2  PERSON 1 | Yeah |
| 1:05:18.5  PERSON 2 | Just like, not sims but the other game where you can make your own city. |
| 1:05:24.2  PERSON 3 | Sim city |
| 1:05:25.4  PERSON 2 | Yeah |
| 1:05:25.8  PERSON 1 | Sim city |
| 1:05:26.1  PERSON 2 | Is it sim city? [laugh] ok |
| 1:05:27.1  PERSON 1 | I guess [laugh] |
| 1:05:35.7  PERSON 2 | So intersection logic |
| 1:05:37.1  PERSON 3 | Or should we have like- |
| 1:05:39.0  PERSON 2 | Is dependent on the road logic, the intersection logic. If the road logic can handle only four cars, for example, per minute, then the intersection logic |
| 1:05:52.3  PERSON 3 | Should we have like a logic manager module that- |
| 1:05:55.4  PERSON 2 | Yeah |
| 1:05:55.4  PERSON 3 | Basically sees how everything |
| 1:05:57.1  PERSON 2 | What do you think [Person 1]? An overall logic manager for intersection logic and road logic. |
| 1:06:04.1  PERSON 1 | Yeah, I think that’s good because- |
| 1:06:06.2  PERSON 3 | And car logic |
| 1:06:06.5  PERSON 1 | Yeah because the- |
| 1:06:08.0  PERSON 2 | Yeah |
| 1:06:08.5  PERSON 1 | The logics are all connected so |
| 1:06:11.4  PERSON 2 | Yeah if the students change one of the three logics then it can be a mess- |
| 1:06:19.0  PERSON 1 | Yeah exactly |
| 1:06:19.6  PERSON 2 | In the simulation but we don’t know |
| 1:06:21.3  PERSON 1 | I think some of the logics are unchangeable, but there are obviously settings which can be changed. |
| 1:06:29.5  PERSON 2 | Yeah, especially car logic. If you know that- |
| 1:06:32.2  PERSON 1 | Yeah car logic is fixed |
| 1:06:33.5  PERSON 2 | Yeah yeah |
| 1:06:35.5  PERSON 1 | Intersection logic is tweakable and- |
| 1:06:37.4  PERSON 2 | Yeah |
| 1:06:37.8  PERSON 1 | Road logic is- has a couple of parameters |
| 1:06:40.5  PERSON 2 | Yeah. Yeah you can tweak it as well. So, the logic manager is in the middle and then intersection logic, car logic and- |
| 1:06:54.2  PERSON 3 | Logic manager is connected to the instance. What do we miss. |
| 1:07:08.7  PERSON 2 | Game manager yeah, road logic, user interface |
| 1:07:21.0  PERSON 3 | If you were to see an architecture of a game what would you expect to be done down here. Like maybe graphics or something, or just like performance |
| 1:07:34.3  PERSON 2 | Yeah delay |
| 1:07:35.9  PERSON 1 | Yeah I think timing is important- |
| 1:07:37.3  PERSON 2 | Yeah |
| 1:07:37.5  PERSON 1 | Important, because you also need to be able to start and stop the simulation |
| 1:07:40.7  PERSON 2 | And is it real time, how, or is it post play |
| 1:07:45.2  PERSON 1 | Yeah exactly. Or maybe you can fast forward it. |
| 1:07:48.2  PERSON 2 | Yeah |
| 1:07:48.5  PERSON 3 | Yeah |
| 1:07:49.6  PERSON 1 | So a timing- |
| 1:07:50.1  PERSON 3 | Well we have- |
| 1:07:50.1  PERSON 2 | A [inaudible] of motion |
| 1:07:51.8  PERSON 3 | A timing scheme we have encapsuled in interaction logic |
| 1:07:56.0  PERSON 2 | Maybe we can make an element like, yeah, play [inaudible]. Yeah I don’t know, some timing- |
| 1:08:05.7  PERSON 3 | The actual game time can’t really direct any game manager or- |
| 1:08:11.4  PERSON 1 | Yeah that’s true |
| 1:08:12.5  PERSON 3 | Or just have [inaudible] |
| 1:08:17.2  PERSON 1 | The graphic generation? |
| 1:08:19.4  PERSON 3 | Yeah |
| 1:08:22.4  PERSON 2 | Maybe you need the user interface itself. |
| 1:08:26.5  PERSON 3 | Yeah what do we- |
| 1:08:27.7  PERSON 1 | Well I think the user interface is- |
| 1:08:29.7  PERSON 2 | It’s only a graphical |
| 1:08:30.8  PERSON 3 | You have this instance element, what does that do? Is it just our game or is that where you would [inaudible] starting game |
| 1:08:42.2  PERSON 2 | Yeah I think in the game manager |
| 1:08:44.5  PERSON 1 | I think the instance is where you save the data and the actual area, or the map. |
| 1:08:49.1  PERSON 3 | Yeah |
| 1:08:49.7  PERSON 1 | So that basically holds information on the current session, so I don’t think that should handle the timing or |
| 1:08:59.5  PERSON 3 | Yeah |
| 1:09:00.0  PERSON 1 | I think the game manager- |
| 1:09:01.3  PERSON 2 | Yeah |
| 1:09:01.3  PERSON 1 | Should handle the timing |
| 1:09:02.1  PERSON 2 | Yeah yeah me too |
| 1:09:04.3  PERSON 3 | Instance should be connected to like, input. [inaudible] clicks |
| 1:09:11.2  PERSON 2 | [inaudible] and a hard drive of course, to save the stimulation, eh the simulation of course. |
| 1:09:23.9  PERSON 3 | Yeah |
| 1:09:25.9  PERSON 2 | So |
| 1:09:26.4  PERSON 3 | But that |
| 1:09:27.7  PERSON 2 | Students |
| 1:09:28.5  PERSON 3 | Should the hard drive be in the functional model? |
| 1:09:30.7  PERSON 2 | Yeah yeah it’s appropriate to use it, maybe also in the functional one. [inaudible] |
| 1:09:47.3  PERSON 3 | Well, I’m not really convinced because we can just say our game manager, if you save the file the game manager sends it to the hard drive, that would be a function |
| 1:09:54.2  PERSON 2 | Yeah |
| 1:09:54.8  PERSON 3 | But |
| 1:09:59.2  PERSON 2 | Yeah and of course you can open pre-existing simulations |
| 1:10:05.8  PERSON 3 | Yeah |
| 1:10:06.6  PERSON 2 | Yeah and a game manager |
| 1:10:07.5  PERSON 3 | Yeah |
| 1:10:08.3  PERSON 2 | Yeah. Via the instance, yeah that’s a- |
| 1:10:11.5  PERSON 3 | Instance is actually just like- |
| 1:10:13.7  PERSON 2 | Oh the game |
| 1:10:14.1  PERSON 3 | The file |
| 1:10:14.8  PERSON 2 | Oh |
| 1:10:15.5  PERSON 3 | File will save |
| 1:10:15.9  PERSON 2 | Yeah |
| 1:10:16.2  PERSON 3 | Yeah and that was the game. But do we- we have a user interface. User interface also- |
| 1:10:26.8  PERSON 2 | Shall I make a copy if this in visio? Or would you like to draw it in- |
| 1:10:34.2  PERSON 1 | I can- let’s just- |
| 1:10:35.8  PERSON 2 | Make a picture |
| 1:10:36.2  PERSON 1 | We have the basics here so we can- when this is finished we can draft it in [inaudible] |
| 1:10:42.1  PERSON 2 | Ok |
| 1:10:42.5  PERSON 3 | Yes well, these have graphics generation should be outside of the user interface zone. And we could have this, graphics gen. |
| 1:11:14.4  PERSON 2 | Graphic gen? |
| 1:11:15.6  PERSON 3 | Graphic generation, connected to the instance |
| 1:11:21.8  PERSON 2 | What I the purpose of graphic gen? |
| 1:11:24.1  PERSON 3 | Actually, it’s playing opposite of the stuff. |
| 1:11:33.4  PERSON 2 | And the user face, that’s the, how do you call it |
| 1:11:40.9  PERSON 3 | Like- |
| 1:11:41.3  PERSON 2 | The windows at the top |
| 1:11:42.8  PERSON 3 | Yeah you can [inaudible]- |
| 1:11:44.5  PERSON 2 | [inaudible] the bar yeah |
| 1:11:45.5  PERSON 3 | [inaudible] yeah |
| 1:11:46.5  PERSON 2 | Ok |
| 1:11:48.8  PERSON 3 | So still something that we miss? We say that the timing thing is saved by the instance itself. Like you- |
| 1:12:00.0  PERSON 2 | Yeah the less settings that they have used for every intersection |
| 1:12:05.5  PERSON 3 | Yeah or just- |
| 1:12:05.8  PERSON 2 | By the logic manager |
| 1:12:06.6  PERSON 3 | Well, all of the game, starting game, will be handled by the instance. Yeah, do we need a separate thing for that? Or could it be done by the game manager. |
| 1:12:26.5  PERSON 2 | Yeah I really don’t know |
| 1:12:27.8  PERSON 1 | I propose we take a break now for five minutes and we’ll think with fresh minds again at- |
| 1:12:34.9  PERSON 2 | Yeah |
| 1:12:34.6  PERSON 1 | Does this have a pause button? |
| 1:12:37.5  PERSON 2 | Stop? Oh, I don’t know if it’s pause or- |
| 1:12:40.2  PERSON 1 | That looks- |
| 1:12:42.0  PERSON 2 | So, let’s continue with our discussion. |
| 1:12:44.3  PERSON 1 | Ok, that was our five minute break |
| 1:12:46.4  PERSON 3 | Yeah |
| 1:12:46.7  PERSON 2 | Yeah of course |
| 1:12:49.8  PERSON 3 | So we are almost finished with functional view I think |
| 1:12:54.8  PERSON 2 | Yeah almost |
| 1:12:54.8  PERSON 3 | There is an issue- |
| 1:12:57.7  PERSON 1 | We’re gonna have to talk about, that is, how are we going to include the external software package |
| 1:13:03.6  PERSON 2 | Yeah which provides the functionalities such as mathematical, yeah ehm- |
| 1:13:14.2  PERSON 3 | Shouldn’t that just be part of the interaction logic? In combination with the timing scheme, that- which are already mid module. So we just say, that [inaudible] package is integrated into the interaction module |
| 1:13:31.2  PERSON 1 | Yeah I can put it- I have the context model opened here so I can put it in there, but what external packages are going to use? |
| 1:13:37.9  PERSON 3 | Yeah package X |
| 1:13:39.4  PERSON 2 | Yeah package X |
| 1:13:41.2  PERSON 3 | I’m not gonna research- |
| 1:13:41.4  PERSON 2 | [inaudible] random number generator, what it says here is statistical distributions and mathematical functionality |
| 1:13:53.7  PERSON 1 | I’ll just put external packages |
| 1:13:55.3  PERSON 3 | I think it’s the idea that we’re going to go on a research- desk research- |
| 1:14:02.4  PERSON 1 | No we don’t have the time |
| 1:14:03.1  PERSON 3 | About the best packages |
| 1:14:07.4  PERSON 2 | No it’s out of our scope |
| 1:14:09.5  PERSON 3 | So and then one thing I was thinking. Like that graphics generation is that the proper way to model it? With a line to the instance. |
| 1:14:22.6  PERSON 2 | Yeah maybe. Yeah depends on how it’s written, in which code I suppose |
| 1:14:32.1  PERSON 1 | Wait, again? |
| 1:14:33.6  PERSON 3 | We have the graphics generation- |
| 1:14:36.1  PERSON 2 | Yeah |
| 1:14:36.4  PERSON 3 | Module, straight to the instance |
| 1:14:40.2  PERSON 2 | So that you can see, if there’s a crash for example, you can see an animation or something like that. Or if there is a traffic jam that the road- |
| 1:14:51.4  PERSON 3 | Like all the- |
| 1:14:51.9  PERSON 2 | Will be drawn in red, for example. Sometimes- |
| 1:14:56.2  PERSON 1 | Well I think you should just draw very small cars on the map, I think that’s the easiest |
| 1:15:00.2  PERSON 3 | I’m sure, but that’s- |
| 1:15:01.6  PERSON 1 | What? |
| 1:15:02.1  PERSON 3 | We’ve gotten on a side track. |
| 1:15:03.6  PERSON 1 | Yeah true. |
| 1:15:07.2  PERSON 3 | Here’s the instance, that’s fine. |
| 1:15:10.8  PERSON 1 | Yeah if that’s the best graphics- because the instance is the current board and the graphic generator- |
| 1:15:15.8  PERSON 3 | yeah |
| 1:15:15.8  PERSON 1 | Is basically refreshing the board and drawing everything so |
| 1:15:18.5  PERSON 3 | Do we need, like, and input manager or something. Like a mouse or [inaudible] controller |
| 1:15:24.6  PERSON 1 | I – that’s in the game manager right? |
| 1:15:26.7  PERSON 3 | Sure |
| 1:15:26.7  PERSON 2 | Yeah that’s game manager. |
| 1:15:28.9  PERSON 1 | It’s really low level |
| 1:15:29.3  PERSON 2 | With your mouse and a keyboard |
| 1:15:30.9  PERSON 3 | So- |
| 1:15:31.8  PERSON 2 | Maybe with keyboard shortcuts as well |
| 1:15:33.7  PERSON 3 | Yeah. Do you guys have any other suggestions or. |
| 1:15:37.7  PERSON 2 | For the functional view? |
| 1:15:38.4  PERSON 3 | Yeah |
| 1:15:40.4  PERSON 1 | I can start modelling it here and we can see if it’s alright |
| 1:15:45.4  PERSON 3 | Ok |
| 1:15:46.3  PERSON 2 | Yeah |
| 1:15:48.2  PERSON 3 | Then |
| 1:15:49.0  PERSON 2 | Yeah, let’s start to the information view |
| 1:15:50.8  PERSON 3 | Yeah. We were thinking to do a petri net, is that still an option for you? |
| 1:16:00.1  PERSON 2 | Eh, petri net. Then we have to decide, yeah |
| 1:16:02.7  PERSON 3 | We have trade off, towards petri net, because I had some other work. |
| 1:16:09.0  PERSON 2 | So yeah, we have petri net talented [Person 1] and [Person 2] and [Person 3] here. |
| 1:16:13.0  PERSON 3 | Yeah |
| 1:16:18.4  PERSON 2 | Let’s see, how would you write this down then? A petri net |
| 1:16:22.1  PERSON 3 | Right. I think if you use your petri net it should be some kind of scenario. |
| 1:16:31.0  PERSON 2 | Yeah, or multiple |
| 1:16:32.1  PERSON 3 | But isn’t- is that really valuable. Cause we can only do so much scenarios. |
| 1:16:40.1  PERSON 2 | So what do we have in the information view |
| 1:16:41.8  PERSON 3 | We have- |
| 1:16:41.8  PERSON 2 | We have area that’s- |
| 1:16:43.0  PERSON 3 | We have setup, like, you basically just upgrade our tile based thing. Like, we have tiles that can contain roads, intersections and traffic lights. But- |
| 1:16:58.6  PERSON 2 | Yeah an intersection has sensors, connected roads and the first one I don’t [laugh] I can’t read |
| 1:17:07.4  PERSON 3 | Busyness |
| 1:17:08.3  PERSON 2 | Oh busyness |
| 1:17:09.2  PERSON 3 | It’s also misspelled but- |
| 1:17:10.2  PERSON 2 | Oh ok |
| 1:17:11.0  PERSON 3 | Not a problem |
| 1:17:11.7  PERSON 2 | The roads itself, connected and [inaudible] |
| 1:17:25.0  PERSON 3 | That’s- we have a solution for this problem you know. Are you gonna throw your solution card? |
| 1:17:30.3  PERSON 2 | Oh not yet, not yet |
| 1:17:31.0  PERSON 3 | I was hoping |
| 1:17:32.0  PERSON 2 | Only in half an hour [laugh] information view yeah [inaudible] |
| 1:17:42.2  PERSON 1 | What does the bottom one say there the- |
| 1:17:44.0  PERSON 3 | The graphics generation |
| 1:17:45.0  PERSON 1 | The graphics generation |
| 1:17:46.2  PERSON 3 | And that one is user interface |
| 1:17:51.6  PERSON 2 | [inaudible] information view |
| 1:17:53.7  PERSON 3 | Include module like what kind of |
| 1:17:58.1  PERSON 1 | Yeah |
| 1:18:00.8  PERSON 2 | I really don’t know yet |
| 1:18:02.1  PERSON 1 | I think the information view is tricky |
| 1:18:04.8  PERSON 2 | Yeah |
| 1:18:04.8  PERSON 3 | Because it’s difficult |
| 1:18:05.4  PERSON 2 | The definition of information viewpoint, describes the way that the system stores, manipulates, manages- |
| 1:18:10.7  PERSON 3 | Yeah |
| 1:18:10.7  PERSON 2 | And distributes information |
| 1:18:12.9  PERSON 3 | Nice and vague |
| 1:18:14.0  PERSON 2 | Yeah |
| 1:18:14.7  PERSON 3 | Yeah |
| 1:18:14.7  PERSON 2 | So if we have this, yeah these topics then |
| 1:18:22.4  PERSON 3 | Well we could do our information view as an overlay on our functional model. Like, we could say- |
| 1:18:35.9  PERSON 2 | Yeah, just like a FAM |
| 1:18:38.6  PERSON 3 | Yeah |
| 1:18:40.1  PERSON 2 | Yeah but with lines and arrows |
| 1:18:52.1  PERSON 3 | Hi? |
| 1:18:54.9  Instructor | Hello, just to remind you that at the two hour mark the design session is over and you have to start on the rationale- |
| 1:19:01.0  PERSON 1 | Yeah sure |
| 1:19:02.2  Instructor | Documentation |
| 1:19:02.2  PERSON 2 | Yeah |
| 1:19:02.6  PERSON 1 | Yes |
| 1:19:03.2  Instructor | Yeah alright, and at the end you have to come to [Professor], and you guys also have to do a questionnaire. |
| 1:19:07.6  PERSON 2 | Yeah |
| 1:19:10.5  Instructor | The office is at [number] |
| 1:19:12.9  PERSON 1 | 584 |
| 1:19:12.9  PERSON 2 | Yeah |
| 1:19:13.7  PERSON 1 | Ok |
| 1:19:13.7  PERSON 2 | Yeah one level |
| 1:19:14.1  PERSON 1 | Yes, thank you |
| 1:19:15.3  PERSON 2 | Yeah thanks. That was [instructor] by the way |
| 1:19:21.9  PERSON 3 | Ok |
| 1:19:22.2  PERSON 2 | Now back to our problem with the information view. How we model- |
| 1:19:26.9  PERSON 3 | Yes |
| 1:19:27.1  PERSON 2 | Its, yeah, which model is good |
| 1:19:29.0  PERSON 3 | We could select a scenario, like |
| 1:19:33.5  PERSON 2 | Yeah make a map |
| 1:19:35.0  PERSON 3 | I want to- |
| 1:19:37.2  PERSON 2 | Intersections and |
| 1:19:38.0  PERSON 3 | Yeah, like scenario plus I’m going to make- add an intersection to my- |
| 1:19:44.5  PERSON 2 | Yeah but if you had only an intersection that’s not enough. You need- |
| 1:19:47.7  PERSON 3 | No |
| 1:19:48.5  PERSON 2 | A car, and you need the behaviour of the cars, and you want to select it with the slider or with- |
| 1:19:53.3  PERSON 3 | Yeah well you can- |
| 1:19:53.5  PERSON 2 | An even number or something |
| 1:19:54.8  PERSON 1 | You getting that? |
| 1:19:55.3  PERSON 3 | Yeah |
| 1:19:56.5  PERSON 2 | So, you have to do it all to make it work |
| 1:19:59.2  PERSON 3 | And that’s the problem yeah |
| 1:20:00.0  PERSON 2 | The simulation, so you need to choose if it’s in a city and how much cars are there in that neighbourhood for example. And then how the logic- isn’t the traffic lights and the cars and |
| 1:20:20.7  PERSON 3 | Mhm |
| 1:20:21.5  PERSON 2 | The speed as well and you have to make sure that every road has a maximum capacity assigned to it. |
| 1:20:33.0  PERSON 3 | Yeah |
| 1:20:34.1  PERSON 2 | Also with the traffic lights and with the seconds- |
| 1:20:35.9  PERSON 3 | No |
| 1:20:36.7  PERSON 2 | And stuff |
| 1:20:36.7  PERSON 3 | [inaudible] like a scenario change where setup game logic or- |
| 1:20:42.9  PERSON 2 | Yeah |
| 1:20:43.6  PERSON 3 | Something like that |
| 1:20:44.1  PERSON 2 | And you have to do everything so yeah |
| 1:20:54.1  PERSON 3 | For instance what we have there really helps |
| 1:20:59.4  PERSON 2 | But if you translate it back to the functional view you use all the elements in there. So it’s not really convenient for us to use a graphical overlay. You know when you want to use the intersection logic, car logic, road logic so you use the logic manager. And the instance you use to save and open a recently- a project for example. Of course you may use the user interface to, yeah, to select stuff or chance settings in the program and, yeah, use the builder to build your city- |
| 1:21:42.2  PERSON 3 | Yeah |
| 1:21:42.2  PERSON 2 | Or your intersections |
| 1:21:45.7  PERSON 3 | Yeah |
| 1:21:46.4  PERSON 2 | And of course you use the GM as well |
| 1:21:50.5  PERSON 3 | So |
| 1:21:52.5  PERSON 2 | Yeah |
| 1:21:53.2  PERSON 3 | Well the instance has information about the game state. The logic manager basically has, like, an aggregation of all the different logic that is gonna be applied on the game state. Do we have-yeah |
| 1:22:11.6  PERSON 2 | Yeah maybe we can zoom in on the logic manager, for example. And select the things the user would like to change. |
| 1:22:25.1  PERSON 3 | Well |
| 1:22:25.1  PERSON 2 | The intersection logic, car eh |
| 1:22:27.7  PERSON 3 | We need the whiteboard, let’s just |
| 1:22:29.7  PERSON 2 | Oh [inaudible] |
| 1:22:29.4  PERSON 3 | [inaudible] |
| 1:22:32.4  PERSON 2 | Oh shit. Maybe you can use this one but I don’t. You just, test it out- |
| 1:22:40.0  PERSON 3 | [inaudible] |
| 1:22:43.4  PERSON 2 | Yeah we have whiteboard [inaudible] |
| 1:22:44.0  PERSON 3 | I think it’s close enough |
| 1:22:44.9  PERSON 2 | Yeah |
| 1:22:44.9  PERSON 3 | Right so, is it ok to just write down what kind of information each of these things has. So instance has- |
| 1:22:56.1  PERSON 2 | Open, save that sort of kind of things, right? |
| 1:22:59.4  PERSON 3 | Information about the game state |
| 1:23:02.6  PERSON 2 | Yeah |
| 1:23:10.2  PERSON 3 | All logic has the game manager |
| 1:23:13.4  PERSON 2 | Yeah |
| 1:23:16.9  PERSON 3 | Builder- |
| 1:23:18.9  PERSON 2 | Yeah it’s also connected to logic manager |
| 1:23:21.2  PERSON 3 | Yeah |
| 1:23:22.3  PERSON 2 | Well- |
| 1:23:22.3  PERSON 3 | That’s probably something for the functional model does |
| 1:23:24.4  PERSON 2 | Yeah for later on, for the builder |
| 1:23:27.4  PERSON 1 | Again? |
| 1:23:27.9  PERSON 3 | Should the builder be connected to the, like the [inaudible] |
| 1:23:30.4  PERSON 2 | Yeah, to the logic manager. So they’re not connected right now, but the builder- |
| 1:23:38.0  PERSON 3 | Maybe |
| 1:23:39.0  PERSON 2 | Builds |
| 1:23:40.2  PERSON 1 | I don’t think so because- |
| 1:23:41.8  PERSON 3 | Builder builds an element, how- |
| 1:23:44.1  PERSON 1 | The builder is basically just drag and drop- |
| 1:23:46.3  PERSON 3 | Yeah |
| 1:23:46.3  PERSON 1 | And then it’s to the board, to the instance. And the instance passes the current board to the logic manager |
| 1:23:52.2  PERSON 3 | So the instance has an element list. |
| 1:23:55.3  PERSON 1 | Yes. Instance is basically the current map |
| 1:23:59.7  PERSON 2 | Ok, yeah that’s also a possibility |
| 1:24:02.4  PERSON 3 | Ok but- so that’s the point for the information view. Builder |
| 1:24:09.6  PERSON 2 | Yeah, what is builder. So the builder has also all the elements to place in a map |
| 1:24:27.6  PERSON 3 | Yeah. What happens is you’re gonna start where we were. Instance to logic manager is basically just-[inaudible] builder. |
| 1:24:46.6  PERSON 1 | So this is what I have for the functional architecture model now. |
| 1:24:50.1  PERSON 2 | Yeah. Yeah it’s the same copy as we- |
| 1:24:51.7  PERSON 1 | Yeah it’s basically the same, so what did you add just now? |
| 1:24:55.4  PERSON 3 | Oh nothing, this is for the information |
| 1:24:56.2  PERSON 2 | Yeah only, yeah [inaudible] |
| 1:24:57.2  PERSON 1 | Oh. Ok so I can ignore that |
| 1:24:59.2  PERSON 2 | Yeah |
| 1:24:59.7  PERSON 1 | So I’ll leave this like this for now |
| 1:25:01.9  PERSON 2 | Yeah |
| 1:25:03.3  PERSON 3 | I have started for the information flow. The builder sends the element list to the instance |
| 1:25:12.8  PERSON 1 | The builder adds the element list to the instance |
| 1:25:15.9  PERSON 3 | Basically by adding elements to- with lists |
| 1:25:17.8  PERSON 1 | Yeah but it doesn’t- |
| 1:25:18.6  PERSON 3 | Is created |
| 1:25:19.3  PERSON 1 | Persee add a list of elements, it just adds elements is what I want- |
| 1:25:22.5  PERSON 3 | Right right. |
| 1:25:25.2  PERSON 1 | Simply by dragging and dropping |
| 1:25:26.3  PERSON 3 | And our next question is who does the instance and the elements. To the logic manager? And the logic manager disperses it around our different logic things to- |
| 1:25:40.9  PERSON 1 | Yeah yeah the logic manager |
| 1:25:42.3  PERSON 3 | [inaudible] |
| 1:25:43.6  PERSON 1 | The logic manager is the overall- well is the manager obviously. And it also passes things like borders between different tiles |
| 1:25:58.6  PERSON 3 | Yeah |
| 1:25:58.6  PERSON 1 | And then the separate logic managers manage the individual parts |
| 1:26:05.5  PERSON 3 | Right. But these arrows, shouldn’t they be the other way around then? |
| 1:26:11.9  PERSON 1 | That’s a good question |
| 1:26:15.3  PERSON 3 | Well, problem. I’m gonna turn my problem card |
| 1:26:17.5  PERSON 1 | Oh there’s a problem card being thrown |
| 1:26:22.3  PERSON 3 | How does this whole logic thing work is basically our problem. |
| 1:26:25.6  PERSON 2 | Yeah. Maybe you can write down like an information flow. Where does the user start |
| 1:26:32.9  PERSON 3 | Yeah I’m trying to do it- to draw it here |
| 1:26:35.2  PERSON 2 | Yeah |
| 1:26:36.5  PERSON 3 | But that, basically we get the same problem. You build something and the builder basically sends the elements to the instance. The instance is basically a list of the elements. |
| 1:26:48.9  PERSON 1 | Yeah |
| 1:26:49.5  PERSON 3 | But how do we get the logic attached to it. Does the instance then send element list to the logic manager? Or is he gonna go- nah I think to the logic manager would then consult all these things. Maybe it’s a- |
| 1:27:08.5  PERSON 2 | Yeah it’s a sort of library |
| 1:27:09.7  PERSON 3 | Like, how do you call it, like a server-bus or something |
| 1:27:13.5  PERSON 1 | Ok |
| 1:27:13.6  PERSON 3 | And then we- or a broker- and then it all gets put together. And then it sends it back with logic. |
| 1:27:21.9  PERSON 1 | Yeah so these arrows are fine, this way |
| 1:27:24.9  PERSON 3 | Or should the- yeah |
| 1:27:28.9  PERSON 1 | I labelled them as interactions by the way. Do you have a better term for that? |
| 1:27:33.5  PERSON 3 | Interactions? |
| 1:27:34.2  PERSON 1 | Yeah |
| 1:27:35.0  PERSON 3 | Our arrows |
| 1:27:36.2  PERSON 1 | Yeah |
| 1:27:39.8  PERSON 3 | Yeah, that’s already |
| 1:27:41.1  PERSON 2 | Yeah |
| 1:27:41.2  PERSON 3 | Always a bit vague with the functional thing. But we could also have, like, the interaction manager in between the builder and the instance. The logic manager. So that the builder- you place it, logic manager adds the logic- |
| 1:27:59.6  PERSON 2 | But the logic manager is sort of like a back office. You know, it’s rendered at the back of the system. And intersection, car and road are clickable items. So that’s the main difference |
| 1:28:20.6  PERSON 3 | No, I imagined it like the user can have some options to change some logic. |
| 1:28:26.1  PERSON 2 | Yeah |
| 1:28:26.2  PERSON 3 | And not everything. So he can change something, the logic manager then basically talks to all the set pieces of logic and creates, like the |
| 1:28:37.3  PERSON 2 | But now you’re saying that the road is already placed in the map right? |
| 1:28:41.6  PERSON 3 | No |
| 1:28:42.2  PERSON 2 | Oh not yet, ok. |
| 1:28:43.1  PERSON 3 | So no |
| 1:28:47.0  PERSON 2 | It could also with- like, yeah, sim city you know, where you can select first some roads, and then you connect it via an intersection and then you can place different types of cars- |
| 1:29:03.4  PERSON 3 | Yeah |
| 1:29:03.4  PERSON 2 | And now you randomly select those or |
| 1:29:07.2  PERSON 3 | Yeah well the thing is, like half of this direction logic is already set. |
| 1:29:12.4  PERSON 2 | Yeah |
| 1:29:12.9  PERSON 3 | And the other half is not set |
| 1:29:14.3  PERSON 2 | Yeah you could have a user interface |
| 1:29:14.8  PERSON 3 | So the logic manager basically serves as the way to connect the user with the things [inaudible] logic |
| 1:29:22.4  PERSON 2 | Yeah |
| 1:29:23.2  PERSON 1 | I have a question, the logic manager, shouldn’t it communicate with the game manager rather than the instance. |
| 1:29:32.9  PERSON 2 | Yeah, but it’s the same thing via the instance. Via the- |
| 1:29:35.9  PERSON 3 | Well |
| 1:29:36.6  PERSON 2 | Yeah |
| 1:29:37.3  PERSON 3 | In this situation it’s because the instance is basically a list of elements, who then need logic. |
| 1:29:45.5  PERSON 1 | Alright, so yeah |
| 1:29:45.8  PERSON 3 | How’s the map |
| 1:29:46.9  PERSON 1 | So it communicates through the [inaudible] |
| 1:29:49.0  PERSON 3 | [inaudible] that was the logic |
| 1:29:51.2  PERSON 2 | Yeah ok yeah that makes sense. |
| 1:29:58.9  PERSON 3 | So in regard to information we will |
| 1:30:19.4  PERSON 2 | [burp] That’s [Person 1] again |
| 1:30:21.9  PERSON 1 | Liar [laugh] |
| 1:30:24.8  PERSON 3 | It doesn’t really make sense to me |
| 1:30:29.2  PERSON 2 | Logic manager |
| 1:30:30.3  PERSON 1 | Builder as elements to- |
| 1:30:32.0  PERSON 3 | The instance |
| 1:30:32.0  PERSON 1 | The instance |
| 1:30:33.6  PERSON 3 | But, these instance need logic so, it will have to talk to the logic manager. |
| 1:30:40.9  PERSON 1 | I think this is the- this is not really an information view, I think. I think maybe |
| 1:30:54.1  PERSON 3 | Yeah it can get- it’s one of the most difficult views, the information view |
| 1:30:57.1  PERSON 2 | Yeah |
| 1:30:57.1  PERSON 1 | Yeah definitely |
| 1:30:58.8  PERSON 3 | But- |
| 1:31:01.4  PERSON 2 | Yeah, we have half an hour so- |
| 1:31:06.8  PERSON 3 | Yeah |
| 1:31:07.4  PERSON 2 | It will be tight. Yeah |
| 1:31:27.7  PERSON 3 | Right. Let’s start our [inaudible] |
| 1:31:29.6  PERSON 2 | Nice. I thought information flow was the easiest one to- |
| 1:31:38.3  PERSON 1 | Well, we have to- |
| 1:31:39.1  PERSON 2 | Picture |
| 1:31:40.0  PERSON 1 | Clearly define what we want to picture. |
| 1:31:42.1  PERSON 3 | Yeah |
| 1:31:44.1  PERSON 1 | Do we want information flow? |
| 1:31:44.3  PERSON 2 | Yeah [inaudible] process, which comes first, which option you choose you choose first |
| 1:31:53.4  PERSON 1 | [laugh] How to fail with whiteboard cleaner |
| 1:31:57.2  PERSON 2 | Good one |
| 1:31:59.5  PERSON 1 | Oh shit, brilliant |
| 1:32:01.6  PERSON 3 | How to make your clean whiteboard |
| 1:32:04.7  PERSON 1 | Anyway |
| 1:32:09.0  PERSON 2 | I thought the user starts the program, and then he selects a sort- kind of map. If it’s in a village, city or somewhere else, then a map will be displayed. And then he selects first of all different kind of roads and it’s connected via the intersections and then the intersections are imported, and then you can alter or change the parameters. |
| 1:32:52.1  PERSON 1 | Well I envisioned more that they just start with an empty map- |
| 1:32:55.7  PERSON 2 | Yeah |
| 1:32:55.7  PERSON 1 | And they draw their own roads. Cause otherwise it’s going to be more complicated |
| 1:33:00.9  PERSON 2 | That’s just like sim city |
| 1:33:02.8  PERSON 3 | Right, but how- |
| 1:33:03.1  PERSON 2 | You select one road and then you can- |
| 1:33:05.1  PERSON 3 | Sure sure |
| 1:33:05.6  PERSON 2 | Select how long it must be and what the kilometres per hour is and how much traffic |
| 1:33:10.0  PERSON 3 | So how do we do that in an information flow about the architecture |
| 1:33:15.2  PERSON 2 | That all begins with the GM, the game manager |
| 1:33:20.9  PERSON 3 | The game manager |
| 1:33:22.9  PERSON 2 | Asks do you wanna start over with a new simulation or you want to |
| 1:33:29.2  PERSON 3 | Is that the information flow? |
| 1:33:33.7  PERSON 2 | Yeah |
| 1:33:35.0  PERSON 3 | What is- |
| 1:33:35.0  PERSON 2 | The user gets a message where he selects which option- |
| 1:33:43.5  PERSON 3 | Yeah ok let’s say |
| 1:33:43.9  PERSON 2 | Is appropriate |
| 1:33:44.8  PERSON 3 | Let’s say the game is created |
| 1:33:46.8  PERSON 2 | Yeah |
| 1:33:46.9  PERSON 3 | Then the game manager- |
| 1:33:49.0  PERSON 2 | Asks |
| 1:33:50.3  PERSON 3 | There’s an instance created |
| 1:33:52.0  PERSON 2 | Yeah |
| 1:33:52.5  PERSON 3 | And what is the next information flow |
| 1:33:55.8  PERSON 2 | From the instance to the logic manager. Because the base of the system is to connect the road with- |
| 1:34:06.6  PERSON 3 | Yeah |
| 1:34:07.2  PERSON 2 | Each other then select different cars, with different car lengths and kilometres per hours for example. Yeah, to complete the simulation |
| 1:34:22.2  PERSON 3 | Right but [inaudible] |
| 1:34:22.5  PERSON 2 | But first of all you- |
| 1:34:23.2  PERSON 3 | Shouldn’t the builder be- |
| 1:34:26.8  PERSON 2 | Yeah, of course via the builder |
| 1:34:28.2  PERSON 3 | Yeah, that’s my problem- |
| 1:34:28.8  PERSON 2 | Yeah |
| 1:34:29.3  PERSON 3 | With it. How do we fit the builder and the logic manager in this process? |
| 1:34:39.8  PERSON 2 | Yeah. And also what about those topics in the information view |
| 1:34:45.4  PERSON 3 | Yeah |
| 1:34:46.6  PERSON 2 | Because we’re- |
| 1:34:47.5  PERSON 3 | Well we can- |
| 1:34:47.6  PERSON 2 | We could |
| 1:34:47.9]  PERSON 3 | Do the information view of like, our [inaudible] blocks |
| 1:34:52.4  PERSON 1 | What do you mean? |
| 1:34:53.6  PERSON 3 | Like [inaudible] |
| 1:34:54.4  PERSON 1 | The interactions- |
| 1:34:55.6  PERSON 3 | Yeah |
| 1:34:55.6  PERSON 2 | Between the |
| 1:34:56.7  PERSON 3 | What logic is attached to what thing |
| 1:35:06.5  PERSON 2 | Yeah, or sort like a database model |
| 1:35:10.8  PERSON 1 | Nah I think we should stick with the information model |
| 1:35:14.4  PERSON 2 | No of course but sort like approach where logic manager one logic of- no. Every intersection can have multiple road logics. And also multiple intersection logic. Because every light has different logics |
| 1:35:44.1  PERSON 1 | Yeah but that’s not really an information view, I think it’s more like a technical view or |
| 1:35:50.1  PERSON 2 | Yeah because in the book here it says like, yeah, sort of like database yeah. |
| 1:35:55.8  PERSON 1 | For our assignment we made the overlay |
| 1:35:57.4  PERSON 3 | Yeah right |
| 1:35:59.3  PERSON 2 | Yeah |
| 1:35:59.6  PERSON 1 | So, maybe we can make a functional overlay |
| 1:36:03.6  PERSON 2 | Yeah, we already |
| 1:36:04.1  PERSON 3 | Yeah then we have to pick a scenario and I’m not sure |
| 1:36:07.6  PERSON 2 | Yeah, which one |
| 1:36:08.4  PERSON 3 | This is not a really a |
| 1:36:10.4  PERSON 2 | I don’t know how to draw it, yeah |
| 1:36:15.4  PERSON 3 | I mean in this case we haven’t really [inaudible] because in the assignment we were like, thinking how did the system work. And now we got to- we can decide how the system works. So we can choose |
| 1:36:28.5  PERSON 2 | Yeah |
| 1:36:28.8  PERSON 1 | That’s true yeah |
| 1:36:29.9  PERSON 3 | Yeah. |
| 1:36:30.5  PERSON 1 | So maybe we can make a UML with not just the class names, but also the information properties- |
| 1:36:37.0  PERSON 3 | Yeah |
| 1:36:37.0  PERSON 1 | You know. A double block, so you just make an- information entities and the flows between them. |
| 1:36:44.6  PERSON 3 | Right |
| 1:36:46.9  PERSON 1 | That’s done, so you don’t have a specific scenario |
| 1:36:49.1  PERSON 3 | I do think that we need like, an element, something that gets the logic |
| 1:36:56.7  PERSON 2 | Yeah, and also the properties that we have written down on the board |
| 1:36:59.4  PERSON 3 | Yeah |
| 1:36:59.7  PERSON 1 | Yeah exactly, cause then the relations between- |
| 1:37:02.6  PERSON 3 | Basically we have the element list moving around and- |
| 1:37:05.6  PERSON 2 | But this- |
| 1:37:06.4  PERSON 3 | And each element is like, a part of this list that we made with our roads and our dials, and has attached logic. |
| 1:37:17.3  PERSON 1 | Wait, come again? |
| 1:37:18.2  PERSON 3 | Yeah ehm |
| 1:37:19.5  PERSON 1 | Yeah |
| 1:37:20.1  PERSON 3 | How do you get the logic or element, is basically the information flow that we should have. I think |
| 1:37:27.0  PERSON 1 | How do you get the logic on an element |
| 1:37:27.9  PERSON 3 | Yeah. We build it, we create an instance with our element list, and then, it’s like magic. We have our instance manager and then we have our logic manager, and the we have our different kinds of logic |
| 1:37:41.0  PERSON 1 | Oh so you want to show how that logic manager and the instance communicate. |
| 1:37:45.9  PERSON 3 | Yeah |
| 1:37:46.9  PERSON 1 | That’s- |
| 1:37:47.2  PERSON 3 | For in our architecture, cause otherwise |
| 1:37:49.5  PERSON 2 | Mhm |
| 1:37:49.5  PERSON 1 | Yeah that’s true, the developers need that to |
| 1:37:52.7  PERSON 3 | Developers, developers, developers |
| 1:37:54.6  PERSON 1 | [laugh] developer indeed |
| 1:38:04.3  PERSON 2 | I thought, the area is the upper- the most important thing here in an information view. And then you select ok, I uses the roads and intersections and those two combined are in the area map so to speak. And the traffic, what does it say there, traffic lights? |
| 1:38:33.4  PERSON 3 | Traffic lights |
| 1:38:34.6  PERSON 2 | Are used in the intersection, intersection has multiple traffic lights and if an intersection consists of, for example- |
| 1:38:46.1  PERSON 3 | Where is the information flow in this? |
| 1:38:49.1  PERSON 2 | It doesn’t have to be an information flow. Yeah, if you look here, this is the flow where it stores- |
| 1:38:57.8  PERSON 3 | Yeah |
| 1:38:57.8  PERSON 2 | The information, so the sensor information is stored in the intersection |
| 1:39:01.7  PERSON 3 | So basically our element list would have all this |
| 1:39:04.6  PERSON 2 | Parts, and then maybe you can display it with a sort of FAM overlay where the information starts or comes from |
| 1:39:13.3  PERSON 3 | We have our instance, and that has like, the element list to start |
| 1:39:28.3  PERSON 2 | Yeah. But now you want to draw the logic manager as well? Cause there’s all the logic |
| 1:39:40.5  PERSON 3 | Yeah |
| 1:39:42.1  PERSON 2 | I thought it was not really, yeah, appropriate to use |
| 1:39:45.5  PERSON 1 | Well, I guess you could do this and just have the logic manager as the single box. But then you have to define the information flow between them |
| 1:39:52.8  PERSON 3 | The logic manager, shouldn’t that receive like, the settings of the user interface? |
| 1:40:01.4  PERSON 2 | But why don’t you draw it like this? Like a sort of database. It’s- I thought it- yeah much easier, it’s not related to the functional view, not yet in my opinion. But maybe later on we can draw something like that. Like the [inaudible] |
| 1:40:17.3  PERSON 1 | We have about twenty minutes left- |
| 1:40:19.0  PERSON 2 | Yeah |
| 1:40:19.0  PERSON 1 | And we have to do the game again in five minutes so |
| 1:40:21.7  PERSON 2 | Yeah, because I don’t understand, yeah, how will this be, yeah, how would you draw this. |
| 1:40:30.3  PERSON 3 | Yeah that’s a problem |
| 1:40:30.7  PERSON 2 | I don’t know, because I can draw this |
| 1:40:34.0  PERSON 3 | And how would you do it that way |
| 1:40:36.7  PERSON 2 | To begin with the area, you- |
| 1:40:39.6  PERSON 1 | Yeah I think we should limit to this, that’s maybe the best option for now. The entity we’re making [inaudible] |
| 1:40:43.9  PERSON 2 | Yeah we’re making [inaudible] we have papers, maybe it’s easier to read |
| 1:40:49.8  PERSON 3 | Papers |
| 1:40:55.6  PERSON 2 | Just wait and see. |
| 1:40:58.5  PERSON 3 | Do you actually use any of those design patterns for a functional model? |
| 1:41:03.1  PERSON 1 | Eh? |
| 1:41:04.1  PERSON 3 | You should split your user interface with your controller layer and your application layer or data layer |
| 1:41:10.4  PERSON 1 | Oh, oh yeah we did |
| 1:41:12.0  PERSON 3 | We have user interface which influences everything. You want to change to [inaudible] |
| 1:41:17.8  PERSON 1 | Yes so, that’s true. We could- it’s only a two hour session [Person 3]. |
| 1:41:31.5  PERSON 3 | But it- it doesn’t have to influence the logic part, user interface. |
| 1:41:39.5  PERSON 1 | That’s true |
| 1:41:41.4  PERSON 3 | Couldn’t you just make it go to, yeah. How do we draw that |
| 1:41:49.5  PERSON 1 | Actually the user interface only affect the- |
| 1:41:52.5  PERSON 2 | One area |
| 1:41:53.1  PERSON 1 | Instance and the builder right? |
| 1:41:55.3  PERSON 2 | Mm, well |
| 1:41:57.1  PERSON 3 | Yeah, you’re game manager is not really a thing. This is the functions, yeah. I would do it that way, yeah |
| 1:42:08.6  PERSON 1 | Alright so, change the [inaudible] |
| 1:42:14.0  PERSON 2 | Those are related in a road can- so if for example you have the area- |
| 1:42:23.2  PERSON 3 | Mhm |
| 1:42:23.8  PERSON 2 | And then one area can have one or multiple roads, and one area can have one or multiple intersections. And then there must be a relation between one road and an intersection, for example |
| 1:42:37.2  PERSON 3 | Yeah |
| 1:42:37.6  PERSON 2 | If for- |
| 1:42:38.4  PERSON 3 | Ok |
| 1:42:39.0  PERSON 2 | One road [inaudible], if one road doesn’t have an intersection- it is possible in our model. You know, it can be the first road- |
| 1:42:53.2  PERSON 3 | Yeah |
| 1:42:54.4  PERSON 2 | Like this |
| 1:42:54.5  PERSON 3 | It can mean like, you have but one road |
| 1:42:56.2  PERSON 2 | Yeah, yeah it’s the ending road, you know? |
| 1:43:00.4  PERSON 3 | Yes well this, this is an intersection |
| 1:43:02.3  PERSON 2 | Yeah. Yeah every road has an intersection |
| 1:43:04.6  PERSON 3 | But if you- let’s say you have like your grid here. And you have like a road going here. |
| 1:43:09.4  PERSON 2 | Yeah |
| 1:43:11.1  PERSON 3 | That |
| 1:43:11.4  PERSON 2 | Yeah, there must be always an intersection in a road |
| 1:43:15.0  PERSON 3 | I think- |
| 1:43:15.4  PERSON 2 | In your model. Every road is connected to another road |
| 1:43:20.0  PERSON 3 | Yes but- |
| 1:43:20.7  PERSON 2 | So one road, have one or more intersections |
| 1:43:23.1  PERSON 3 | How do you propose to constraint? Because if you draw your first road, and you don’t have an intersection |
| 1:43:30.3  PERSON 2 | Not to begin with, but later on you can add some intersection |
| 1:43:33.8  PERSON 3 | So it should not be a concrete constraint. Every road should have an intersection |
| 1:43:39.9  PERSON 2 | Yeah. Yeah, but how to draw this like this. Then you have to draw also a line between road and intersection. One road can have, yeah multiple, have one or more- |
| 1:43:54.2  PERSON 3 | Yeah one to many |
| 1:43:54.7  PERSON 2 | Intersections |
| 1:43:55.4  PERSON 3 | Yeah |
| 1:43:55.4  PERSON 2 | Yeah and then here you can assign the properties of the road. So like- |
| 1:44:02.5  PERSON 3 | But we also make like, our tile thing. |
| 1:44:05.2  PERSON 2 | Tile? |
| 1:44:06.1  PERSON 3 | Our tile- |
| 1:44:07.0  PERSON 2 | Yeah, yeah |
| 1:44:07.9  PERSON 3 | I think that’s an- |
| 1:44:07.9  PERSON 2 | That’s the, with the structure of- |
| 1:44:09.4  PERSON 3 | I want to include with- I would say like and area as multiple tiles. [inaudible] consists of roads and intersections |
| 1:44:16.9  PERSON 2 | Yeah so you can select here that the- |
| 1:44:19.2  PERSON 3 | No I would- |
| 1:44:19.4  PERSON 2 | [inaudible] is a tile |
| 1:44:20.4  PERSON 3 | I would maybe have like a tile here, and then [inaudible] those lines to that and so like this. |
| 1:44:26.4  PERSON 2 | Yeah, and ok, then this is the tile. |
| 1:44:28.8  PERSON 3 | Yeah |
| 1:44:29.2  PERSON 2 | Ok. Yeah it’s a bit difficult to |
| 1:44:35.8  PERSON 3 | Yeah |
| 1:44:36.2  PERSON 2 | Why a tile is there, in the first place? If you draw it like, a sort like database right now |
| 1:44:43.5  PERSON 3 | Yeah? |
| 1:44:44.1  PERSON 2 | What is tile? |
| 1:44:45.4  PERSON 3 | Tile is like, the block on our- |
| 1:44:50.7  PERSON 2 | But is it not obsolete, because area can have one road, one intersection and- one intersection can have one or more traffic light. So that’s the last one |
| 1:45:04.4  PERSON 3 | Mhm and sensors |
| 1:45:06.7  PERSON 2 | A road. Yeah with sensors and included, so, for example let’s look at- |
| 1:45:12.9  PERSON 3 | Would have sensors |
| 1:45:14.7  PERSON 2 | Traffic lights |
| 1:45:23.3  PERSON 3 | Like all these requirements that we have, like, traffic label should be conveyed visually to the user in real-time. The current state of intersections, traffic lights should also be depicted visually, and depict when they change. |
| 1:45:39.4  PERSON 2 | [inaudible] intersection |
| 1:45:39.6  PERSON 3 | How can we say that we have [inaudible] those requirements |
| 1:45:48.8  PERSON 1 | Yeah, that’s a good question |
| 1:45:54.3  PERSON 2 | If one or more. So it would be like this is I suppose. One intersection can have one or more traffic lights, with a maximum of four. |
| 1:46:13.4  PERSON 3 | Yeah |
| 1:46:14.0  PERSON 2 | Yeah. On each side. And [even kijken hoor] one- |
| 1:46:22.6  PERSON 3 | Right |
| 1:46:22.6  PERSON 2 | Area can have one or more intersections. And one road can have also one or more intersections- |
| 1:46:31.2  PERSON 3 | Mhm |
| 1:46:31.2  PERSON 2 | With also a maximum of four. |
| 1:46:32.5  PERSON 3 | Yeah. And you have the sensors that we [inaudible] |
| 1:46:35.6  PERSON 2 | Yeah, so the sensors and- |
| 1:46:39.8  PERSON 3 | One intersection could have, how many sensors? I imagine if it’s four- |
| 1:46:45.2  PERSON 2 | Sensors |
| 1:46:45.8  PERSON 3 | I mean it’s say |
| 1:46:46.5  PERSON 2 | Four does- traffic lights have sensors, that was also a thing to point out. And the sensors, oh are at the traffic lights, have sensors or? |
| 1:46:57.2  PERSON 3 | We said the intersection had sensors |
| 1:47:02.2  PERSON 2 | But with all intersections, with all the lights, with all the four lights. |
| 1:47:06.2  PERSON 3 | Yes |
| 1:47:06.3  PERSON 2 | Or can- |
| 1:47:07.2  PERSON 3 | Like you have a sensor on each lane in an intersection. |
| 1:47:11.2  PERSON 2 | But is it maybe possible to say that one traffic light is- has a sensor. And that all the other- |
| 1:47:25.2  PERSON 3 | Like, it’s not a requirement. It’s not required that they have a sensor but they can have a sensor so they should be- |
| 1:47:31.5  PERSON 2 | Yeah |
| 1:47:32.1  PERSON 3 | [inaudible] like a |
| 1:47:34.4  PERSON 2 | But they have-one intersection has sensors, then all the four lights are automatically controlled. So to speak, in that case |
| 1:47:46.8  PERSON 1 | Oh, we should start the- |
| 1:47:48.4  PERSON 2 | Yeah let’s start with, yeah, solution maybe, or what. Yeah, problem, not really, assumption, risk, trade-off. Yeah solution |
| 1:48:00.7  PERSON 1 | Yeah |
| 1:48:00.7  PERSON 2 | Find a solution for the sensors |
| 1:48:03.4  PERSON 3 | Sensor problem |
| 1:48:04.2  PERSON 2 | Yeah. Have traffic light sensors or have intersections |
| 1:48:06.5  PERSON 3 | [inaudible] problem, we have our problem and do we want to put sensors at the intersection or at traffic lights. And really, we want to find out if there is a risk or a trade-off to do this. Is there one? |
| 1:48:25.8  PERSON 1 | The cards [inaudible] play the cards |
| 1:48:27.6  PERSON 3 | Is there a trade-off. What’s the trade-off? |
| 1:48:30.6  PERSON 1 | Wait for-again? I was- |
| 1:48:33.6  PERSON 3 | We want to say in our information model, like, sensors |
| 1:48:38.3  PERSON 1 | Yeah |
| 1:48:38.8  PERSON 3 | Either an intersection could have sensors or the traffic lights should have sensors |
| 1:48:45.8  PERSON 2 | Yeah. Have to think about them- |
| 1:48:47.0  PERSON 1 | I think an intersection should have |
| 1:48:49.0  PERSON 3 | I have also two |
| 1:48:49.6  PERSON 2 | Ok |
| 1:48:50.7  PERSON 1 | Because there is not really a trade-off. Because you can still influence each other’s logic, [hick] but [laugh] |
| 1:48:59.1  PERSON 2 | That was also [Person 1] again [laugh] |
| 1:49:01.7  PERSON 1 | But they just affect the traffic light of that intersection. But it also affects the other traffic lights at an intersection, if you get what I mean. It doesn’t just affect the traffic light in that lane it effects all- |
| 1:49:21.8  PERSON 3 | Yeah |
| 1:49:21.8  PERSON 1 | The traffic lights in the intersection. So |
| 1:49:24.6  PERSON 3 | Ok, that’s an assumption |
| 1:49:26.2  PERSON 2 | Yeah so |
| 1:49:27.8  PERSON 3 | Assumption. We’re gonna assume that’s the case |
| 1:49:31.0  PERSON 1 | Yeah, and eh, yeah |
| 1:49:34.7  PERSON 3 | So, ok. Do we want to assume this? |
| 1:49:37.1  PERSON 1 | Don’t forget to note the cards- |
| 1:49:38.1  PERSON 2 | Yeah |
| 1:49:38.1  PERSON 1 | We’re playing |
| 1:49:38.7  PERSON 2 | Yeah |
| 1:49:40.5  PERSON 3 | I don’t really think there’s a risk in assuming this, because |
| 1:49:43.9  PERSON 1 | No, I think that’s a solution, that’s really the question you have [laugh] So, do you agree Person 2? |
| 1:49:55.1  PERSON 2 | Sorry, just doing my administration [laugh] |
| 1:50:01.0  PERSON 1 | So we have about ten minutes left so we should- |
| 1:50:02.5  PERSON 2 | Yeah |
| 1:50:03.1  PERSON 1 | Really start wrapping up. |
| 1:50:03.9  PERSON 2 | Yeah |
| 1:50:04.0  PERSON 3 | Ok |
| 1:50:04.9  PERSON 2 | I only have to make sure roads |
| 1:50:07.3  PERSON 1 | Yeah I- |
| 1:50:07.5  PERSON 2 | Can- |
| 1:50:10.4  PERSON 3 | You’ve changed the functional model |
| 1:50:10.7  PERSON 1 | Yeah it looks like this now. This is the functional model, I’m now showing the second version of our functional model. |
| 1:50:20.0  PERSON 3 | Ok |
| 1:50:21.9  PERSON 2 | Yeah, yeah. |
| 1:50:24.1  PERSON 1 | And the context is just, is still this. Alright |
| 1:50:30.6  PERSON 3 | Yeah |
| 1:50:30.6  PERSON 1 | It’s quite simple but we don’t really have anything else |
| 1:50:34.0  PERSON 2 | Yeah at the moment, yeah, in more than ten minutes |
| 1:50:36.9  PERSON 1 | Yeah so we have to start on the- |
| 1:50:39.2  PERSON 2 | Yeah the information view |
| 1:50:40.4  PERSON 1 | The information model |
| 1:50:41.7  PERSON 2 | Yeah for- |
| 1:50:41.7  PERSON 1 | I can start modelling in- |
| 1:50:43.8  PERSON 2 | Yeah, I only have- roads can- users can select the size, how long it will be? Or can- |
| 1:50:53.4  PERSON 1 | No |
| 1:50:53.9  PERSON 2 | Select and then on the map and then, so long it gets |
| 1:50:56.8  PERSON 3 | No, they add tiles. So you will add like, a road tile |
| 1:51:01.1  PERSON 2 | Yeah, but for the property, it’s in a sort of database, road. It’s a property of a road. So [kijk] so the- |
| 1:51:11.5  PERSON 3 | Well no |
| 1:51:11.6  PERSON 2 | So the type of road can be selected? |
| 1:51:12.5  PERSON 3 | Road is a property of tile. A tile can be a road. |
| 1:51:20.1  PERSON 2 | Yeah and an intersection, and a tile can also be an intersection |
| 1:51:23.5  PERSON 3 | Can also be an intersection yes, yes |
| 1:51:26.3  PERSON 2 | Ok. But for the roads you want to address how much lanes a road has. That’s also in the tiles then. So everything is in the tiles |
| 1:51:39.4  PERSON 3 | Everything is in the tile, but a road can have a type, yeah |
| 1:51:43.5  PERSON 2 | And decided how long it will be and also how much lanes a road has |
| 1:51:48.7  PERSON 3 | Size, yeah just |
| 1:51:49.6  PERSON 2 | Yeah size |
| 1:51:51.0  PERSON 3 | [inaudible] type |
| 1:51:51.0  PERSON 2 | Full size, size if the length of the road |
| 1:51:53.1  PERSON 1 | No but, we have tiles, so |
| 1:51:54.0  PERSON 3 | We have tiles |
| 1:51:54.8  PERSON 1 | The length is always the same for one piece of road |
| 1:51:57.2  PERSON 2 | Oh ok |
| 1:51:58.5  PERSON 3 | But what’s the difference between type, what do you mean with that |
| 1:52:03.9  PERSON 2 | Yeah, it’s [inaudible] so I don’t |
| 1:52:06.4  PERSON 3 | Yeah, we’ll leave it question mark but |
| 1:52:08.4  PERSON 2 | Yeah so, that is also [inaudible] |
| 1:52:09.3  PERSON 3 | I think lanes is all you need for the types |
| 1:52:16.1  PERSON 2 | Yeah, or maybe another slider like throughout or output of the road. So students can say- |
| 1:52:25.1  PERSON 3 | Yeah |
| 1:52:26.3  PERSON 2 | I don’t know how, what of my sizes we could- |
| 1:52:31.8  PERSON 3 | We could have like- |
| 1:52:33.9  PERSON 2 | It must handle two hundred cars each minute |
| 1:52:38.2  PERSON 3 | I would propose to remove type and add capacity |
| 1:52:41.3  PERSON 2 | Yeah. Yeah, capacity is a better option |
| 1:52:44.2  PERSON 3 | Or should we, maybe, add like, something, a road has lanes, and a lane has a capacity, maybe |
| 1:52:53.2  PERSON 2 | Yeah, but that depends on the speed of the road- |
| 1:52:53.2  PERSON 3 | Yeah, the information model |
| 1:52:55.7  PERSON 2 | Eh, speed also, speed is not really mentioned in the model right now. It depends on the speed of the cars. If the cars can go hundred miles on that road then the capacity can be tripled. |
| 1:53:14.2  PERSON 3 | Well, not capacity but, like output. |
| 1:53:18.1  PERSON 2 | Yeah, but that depends on the speed as well |
| 1:53:19.5  PERSON 3 | If you have a road like a kilometer and you can go a hundred miles, and everybody is going a hundred miles, you won’t have the same amount of cars on- [inaudible] will be driving further from each other |
| 1:53:32.2  PERSON 2 | Yeah but, the capacity will be higher if the speed is |
| 1:53:41.3  PERSON 3 | The capacity will be lower I think, or the same |
| 1:53:44.0  PERSON 2 | Do you think? [Person 1] what’s your opinion |
| 1:53:46.0  PERSON 3 | If you’re standing in traffic |
| 1:53:46.8  PERSON 2 | If the speed is increased on a road then capacity will automatically also increase? |
| 1:53:52.4  PERSON 3 | You won’t be able to fit more cars on the same road, if you’re going faster |
| 1:53:56.0  PERSON 1 | No, that’s true. The capacity is always the same. I guess cars go through faster but they have to keep more distance |
| 1:54:02.6  PERSON 3 | I would propose to have a separate thing for lanes |
| 1:54:03.0  PERSON 2 | Yeah wow wow, what I understand- yeah |
| 1:54:06.8  PERSON 1 | Is that smart? |
| 1:54:07.6  PERSON 3 | You just have lanes, or does that not add anything? |
| 1:54:12.5  PERSON 1 | So, five minutes left on the- |
| 1:54:14.1  PERSON 3 | Oh |
| 1:54:14.1  PERSON 2 | Yeah. This is sort of like database view, so one area can have one or more roads. And also the other way around, like an area can have one or more intersections. And one road can have also multiple intersections, if it’s a long road. |
| 1:54:37.8  PERSON 1 | But that’s the point |
| 1:54:37.8  PERSON 3 | A tile, you just have a tile |
| 1:54:41.2  PERSON 2 | Yeah yeah, I mean tiles |
| 1:54:41.5  PERSON 3 | So a tile can be a- |
| 1:54:42.3  PERSON 2 | So tile’s here in the middle |
| 1:54:43.9  PERSON 3 | A tile can be a road or intersection |
| 1:54:48.1  PERSON 1 | Yeah, not an area as well, this is- |
| 1:54:50.3  PERSON 2 | No, this is what we have drawn on the board |
| 1:54:52.2  PERSON 3 | An area consists of tiles |
| 1:54:54.0  PERSON 2 | Yeah, and a tile is a road and intersection |
| 1:54:57.7  PERSON 3 | Yeah |
| 1:54:58.0  PERSON 1 | Oh yeah, I guess you can have empty tiles, but I’ll start on the- Can you have empty tiles? |
| 1:55:06.1  PERSON 3 | Yeah, alright but- or we just say, like, a tile is created and [inaudible] But is it valuable to add a separate thing for lanes? |
| 1:55:18.0  PERSON 1 | How do you call this, is this UML or? |
| 1:55:20.9  PERSON 3 | I have no idea |
| 1:55:21.1  PERSON 2 | Yeah databases |
| 1:55:24.5  PERSON 3 | UML [inaudible] |
| 1:55:24.5  PERSON 2 | Yeah UML maybe. What’s it say here, entity relationship diagram |
| 1:55:33.7  PERSON 3 | Oh yeah, that’s something |
| 1:55:35.0  PERSON 2 | Yeah [inaudible] |
| 1:55:37.8  PERSON 3 | I think that’s UML right? |
| 1:55:40.5  PERSON 2 | Yeah it looks like UML |
| 1:55:44.2  PERSON 3 | Probably is |
| 1:55:49.2  PERSON 2 | Did we miss something |
| 1:55:52.4  PERSON 3 | Well, we only have, like, what’s this? |
| 1:55:55.9  PERSON 2 | Oh, traffic lights, you know |
| 1:55:57.7  PERSON 3 | Yeah yeah |
| 1:55:58.5  PERSON 2 | One intersection can have one or more traffic lights. And a traffic light can have sensors or not, but we have chosen to- |
| 1:56:08.3  PERSON 3 | But- |
| 1:56:09.3  PERSON 2 | To select an intersection |
| 1:56:10.6  PERSON 3 | A lane can also have a traffic light. And that’s relevant because if you want to go left- |
| 1:56:18.0  PERSON 2 | Yeah |
| 1:56:18.0  PERSON 3 | Then there should be a specific traffic light signal |
| 1:56:21.9  PERSON 2 | Yeah |
| 1:56:22.5  PERSON 3 | Like an arrow, like going left |
| 1:56:24.3  PERSON 2 | Yeah |
| 1:56:24.5  PERSON 3 | It’s one of the requirements. So I think lane should also be connected to traffic lights |
| 1:56:31.1  PERSON 2 | So lane is separate |
| 1:56:32.1  PERSON 3 | So that you know, so that you can- |
| 1:56:34.0  PERSON 2 | But what is the relationship between the road and the lane |
| 1:56:36.1  PERSON 3 | The road has lanes |
| 1:56:37.8  PERSON 2 | Yeah, multiple lanes, or one more |
| 1:56:39.6  PERSON 1 | A lane is separate I thought |
| 1:56:41.7  PERSON 2 | Yeah |
| 1:56:41.7  PERSON 3 | If [inaudible] |
| 1:56:44.4  M | Yeah, roads can have more or, yeah, one or more lanes |
| 1:56:47.3  PERSON 3 | Is that necessary. I don’t know. In this situation are the lanes connected to the traffic lights. Roads are connected to the intersections |
| 1:56:59.2  PERSON 2 | And intersections are connected to the traffic lights |
| 1:57:00.1  PERSON 3 | Connected to the traffic lights. Does that work? |
| 1:57:03.9  PERSON 2 | Yeah is suppose. One road can have one or more lanes. Yeah, and there’s no maximum for lane, maybe- |
| 1:57:22.4  PERSON 3 | Well yeah |
| 1:57:23.6  PERSON 2 | A property of a lane is capacity |
| 1:57:26.5  PERSON 3 | Yeah |
| 1:57:26.5  PERSON 2 | So we can add that |
| 1:57:31.8  PERSON 1 | [inaudible] in speed maybe? No, that’s-speed- |
| 1:57:34.4  PERSON 2 | Yeah, speed was not- |
| 1:57:34.7  PERSON 3 | Speed is not a road |
| 1:57:35.8  PERSON 2 | Yeah |
| 1:57:36.5  PERSON 3 | Yeah every- I think that it’s a road thing here |
| 1:57:39.0  PERSON 2 | Yeah ok, so add speed there |
| 1:57:41.4  PERSON 3 | But, shouldn’t a lane also be connected to the traffic lights? |
| 1:57:46.7  PERSON 2 | Yeah, I thought it was the roads |
| 1:57:47.4  PERSON 3 | Yeah |
| 1:57:48.1  PERSON 2 | Because one road can have one or more intersections and consists of one or more |
| 1:57:51.3  PERSON 3 | So in this situation the traffic lights |
| 1:57:55.3  PERSON 2 | Are connected- |
| 1:57:56.3  PERSON 3 | To the lanes also, because- |
| 1:57:57.4  PERSON 2 | Yeah yeah, the other way around |
| 1:58:00.2  PERSON 3 | Yeah you need to know what lane you are on for the traffic light where it- because if you want to go left you need a special thing |
| 1:58:08.6  PERSON 2 | What are the properties of a traffic light |
| 1:58:12.3  PERSON 3 | The red, green, orange |
| 1:58:14.4  PERSON 2 | Yeah so, signal- |
| 1:58:16.1  PERSON 3 | And your timing scheme. |
| 1:58:18.5  PERSON 2 | Yeah, and if it has a sensor |
| 1:58:22.4  PERSON 3 | Yeah the- yeah |
| 1:58:23.7  PERSON 2 | Yeah, that’s the only property it has |
| 1:58:27.6  PERSON 3 | I think timing scheme |
| 1:58:30.0  PERSON 2 | Yeah |
| 1:58:31.2  PERSON 3 | And yeah, output, the colour |
| 1:58:40.5  PERSON 2 | And yeah, signal? Is that good, or light condition or something |
| 1:58:48.3  PERSON 3 | Colour, the colour of the- |
| 1:58:49.2  PERSON 2 | Yeah colour |
| 1:58:49.9  PERSON 3 | Yeah |
| 1:58:52.2  PERSON 2 | Yeah, it’s a good- colour |
| 1:58:52.2  PERSON 3 | Yeah, I think so |
| 1:58:57.2  PERSON 2 | Yeah colour |
| 1:58:58.5  PERSON 3 | State or something |
| 1:59:00.2  PERSON 2 | Colour state yeah. And then intersections have- [Person 3] what is the first one again? On the board |
| 1:59:17.0  PERSON 3 | Area |
| 1:59:17.7  PERSON 2 | Area |
| 1:59:18.6  PERSON 1 | So we have one minute left. Let’s wrap up the- |
| 1:59:21.8  PERSON 2 | Yeah, so we have finished our context view, and then we completed our functional view. And now we have almost completed our information view. And the information view consists of an area, that’s sort to speak of like a map, and a map can have one or more roads. One road can have one or more lanes, with no maximum value. |
| 2:00:00.1  PERSON 3 | Well, should there be a maximum value? |
| 2:00:03.3  PERSON 2 | Yeah, I don’t know if it’s a high way |
| 2:00:07.3  PERSON 3 | Yeah |
| 2:00:07.9  PERSON 2 | Yeah, I don’t know really. Maybe four, maybe five, I don’t know. And then one road can have one or more intersections. Especially if it’s a long road |
| 2:00:19.8  PERSON 3 | Couldn’t a lane also have a direction. |
| 2:00:25.3  PERSON 1 | Yeah I guess |
| 2:00:26.3  PERSON 2 | Yeah |
| 2:00:27.2  PERSON 3 | I guess, on a road |
| 2:00:28.0  PERSON 2 | Yeah that’s important |
| 2:00:30.2  PERSON 3 | [inaudible] lanes going in directions |
| 2:00:33.8  PERSON 2 | But then, is the database still valid? |
| 2:00:43.6  PERSON 3 | What do you mean? |
| 2:00:46.9  PERSON 2 | Is it not connected with the intersection. |
| 2:00:49.9  PERSON 3 | What? |
| 2:00:51.2  PERSON 2 | Lanes |
| 2:00:54.9  PERSON 3 | You mean it should be, yeah |
| 2:00:55.8  PERSON 2 | Yeah if it’s- |
| 2:00:57.8  PERSON 3 | I mean, a road does have a lane |
| 2:01:00.4  PERSON 2 | Yeah, one or more lanes |
| 2:01:01.4  PERSON 3 | Yeah, it should be. If road is connected to the traffic light, the lanes would also be connected |
| 2:01:07.7  PERSON 2 | Yeah. Oh, we’re over two hours now |
| 2:01:09.7  PERSON 3 | Yeah |
| 2:01:11.1  PERSON 2 | Shall we stop or continue |
| 2:01:12.6  PERSON 3 | Yeah we’ll just wrap up the information model as we have it now and then- |
| 2:01:16.4  PERSON 2 | Yeah |
| 2:01:16.4  PERSON 1 | Start from the documentation |
| 2:01:17.7  PERSON 2 | Yeah |
| 2:01:18.4  PERSON 1 | So I guess we can end the audio recording now? |
| 2:01:20.2  PERSON 2 | Yes, yeah wait a minute, right now. Ok, bye |