

## Foreword and explanations

For this particular session, several things went wrong, especially during practical labs, explaining why we didn't get the same level of satisfaction as we usually do.

We first explain what happened, and then share our actions to make such issues less likely to happen again.

### Session issues

The main issue is that participants didn't respect the maximum number of working groups. To make sure that the instructor has enough time to spend with every one during the practical labs, we limit the number of working groups to 8.

During this particular session, 20 people attended, and even though we just brought 8 instances of the lab hardware, every person tried to run the labs on his own PC, and sharing the hardware afterwards. This is the first time this happens in one of our training sessions. People also copied partial results from other PCs, skipping some intermediate steps, causing more issues. The consequence was that the instructor was overwhelmed by people facing issues during practical labs, and was unable to help everyone at the same time.

People were also frustrated by network speed. Though the instructor shared Android sources downloaded ahead of time (which take a lot of time and network bandwidth to download), there were other steps (like installing development packages, just like in real life) which required network access. Having 20 PCs working at the same time also slowed down everyone.

Another issue was that people just attended the session for their general culture, without the need for Android in real projects. Since they had their own PCs, they got distracted by their e-mails and didn't pay much attention to the lectures. The first consequence was more issues in the practical labs, which often require to get back to the lectures. Some participants seem to have expected practical labs which can be run just by following instructions, without necessarily having to understand what is being done. Free Electrons' labs often forces participants to get back to the lectures, trying to make sure that people have understood key concepts. That's why we tell people what do do, but not how to do this, though all required information is available in the lecture slides.

The second consequence of this lack of attention is that the trainer went quicker on the slides, instead of giving additional details and sharing anecdotes as he usually does, hoping that the practical labs would catch their attention better. This gave some participants the impression that the trainer was reading his slides, instead of adding useful value to the slides.

The last issue was that people were not familiar enough with the Unix / Linux command line interface, which was a prerequisite for the course. They were familiar with the DOS command line, which didn't help. All this slowed down people in their practical labs.

### How to avoid this in future sessions

Our instructor didn't dare to force the customers to use a maximum of 8 PCs in practical labs. This is our fault, and we will make sure that this doesn't happen again.

Here is what we will do to reduce the likelihood of meeting the same issues again:

- Let participants know ahead of time that their full attention and availability is required to follow the course, at least to participate to practical labs. Otherwise, everyone's progress will be slowed down because of the instructor is busy supporting people who missed information shared during

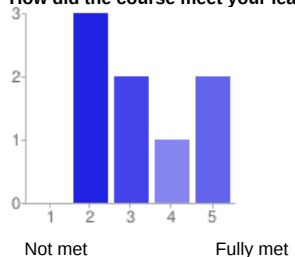
the lectures.

- To avoid distractions, we will also recommend the use of dedicated training PCs, instead of letting people use their own laptops.
- We will stress the 8 working groups requirement stronger by specifying that only 8 PCs can be used in the practical labs.
- We will also insist stronger on the requirement for a fast network, by putting this requirement in our contracts.
- We will insist even more on the requirement to be familiar with the UNIX / Linux command line interface.
- For people who are just interested in lectures, as well to complement everyone's notes, we will develop solution documents, that describe and explain the steps taken during practical labs.

# 8 [responses](#)

## Summary [See complete responses](#)

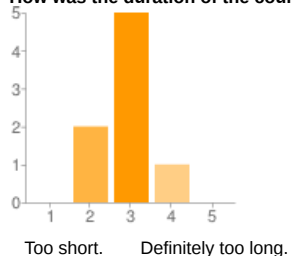
How did the course meet your learning objectives?



1 - Not met	0	0%
2	3	38%
3	2	25%
4	1	13%
5 - Fully met	2	25%

### Comments and suggestions

How was the duration of the course?

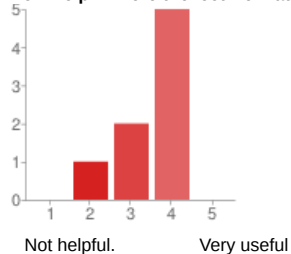


1 - Too short.	0	0%
2	2	25%
3	5	63%
4	1	13%
5 - Definitely too long.	0	0%

### Comments and suggestions

There was no time left for application development section. And I would like to see/do some debugging sessions as well. Having scheduled break times would help.

How helpful were the lecture materials?

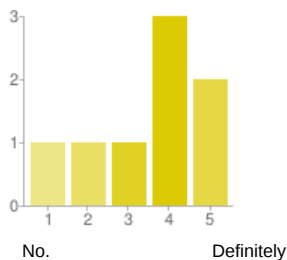


1 - Not helpful.	0	0%
2	1	13%
3	2	25%
4	5	63%
5 - Very useful	0	0%

### Comments and suggestions

Slides were good but the lab book is poorly explained. Some steps can not be passed without the help of the lecturer.

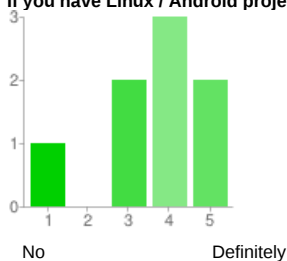
Will you recommend these materials to others?



1 - No.	1	13%
2	1	13%
3	1	13%
4	3	38%
5 - Definitely	2	25%

**Comments and suggestions**

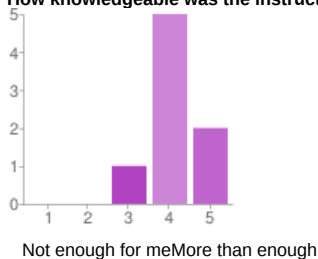
**If you have Linux / Android project opportunities, will you use these materials again in the future?**



1 - No	1	13%
2	0	0%
3	2	25%
4	3	38%
5 - Definitely	2	25%

**Comments and suggestions**

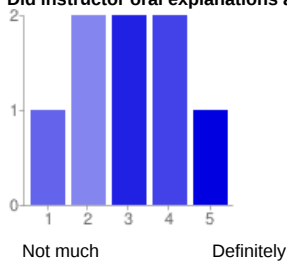
**How knowledgeable was the instructor?**



1 - Not enough for me	0	0%
2	0	0%
3	1	13%
4	5	63%
5 - More than enough	2	25%

**Comments and suggestions**

**Did instructor oral explanations add value to the lecture materials?**

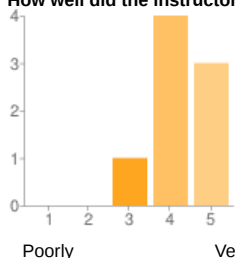


1 - Not much	1	13%
2	2	25%
3	2	25%
4	2	25%
5 - Definitely	1	13%

**Comments**

It was like that he just read the slides.

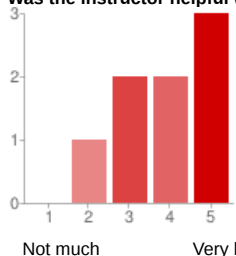
**How well did the instructor answer questions from the audience?**



1 - Poorly	0	0%
2	0	0%
3	1	13%
4	4	50%
5 - Very well	3	38%

**Suggestions and comments**

**Was the instructor helpful with practical labs?**



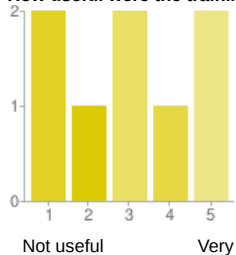
1 - Not much	0	0%
2	1	13%
3	2	25%
4	2	25%
5 - Very helpful	3	38%

**Comments and suggestions**

For, let's say, 15 people, one instructor is not enough for such a course.

Actually the instructor was very helpful but I gave 2 because he helped everyone individually and there were 20-25 people in the training. This method can only be used for training with max. 7-8 people.

**How useful were the training labs?**

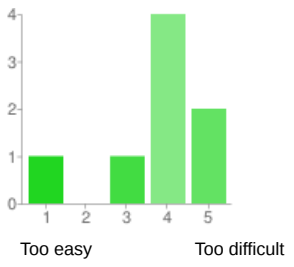


1 - Not useful	2	25%
2	1	13%
3	2	25%
4	1	13%
5 - Very useful	2	25%

**Comments and suggestions**

LABs were written without detailed explanation and example sources contains errors. so this takes too much time to complete the labs. Lab materials should include step by step explanations and should be written to teach to a beginner in my opinion. It was impossible to complete the labs without the instructor. most of the lab time is stolen from the course, it passed for waiting the instructor.

**How difficult were the training labs?**



1 - Too easy	1	13%
2	0	0%
3	1	13%
4	4	50%
5 - Too difficult	2	25%

**Comments and suggestions**

Most probably training labs are not very difficult. But especially in the second half of the exercises lab book is poorly explained and skips most of the necessary steps. Some steps can not be passed without the help of the lecturer. Labs are difficult to understand the basic principles. Missile launcher is useless for the Lab I think. A hello world example will be better to explain the basics of native android application development and also for the JNI thing. Too many things are left out in the training materials. I understand why some things are left out but that's not productive. People I ...



1 - Definitely not enough	0	0%
2	0	0%
3	2	25%
4	3	38%
5 - Definitely too much time for labs	3	38%

**Comments and suggestions**

Time is spent for waiting for the instructor and it's again impossible to solve problems alone.

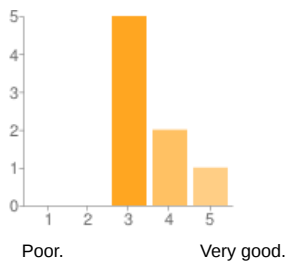


1 - Poor	0	0%
2	2	25%
3	3	38%
4	3	38%
5 - Very good	0	0%

**Comments and suggestions**

It's our fault actually. This was related to our company. The room is badly air conditioned, but that was our arrangement. So I'm disregarding that. There are some large downloads involved, this could be prepared beforehand on some disks to save on download time. our local environment

**How do you rate the training equipment (mainly computers)?**

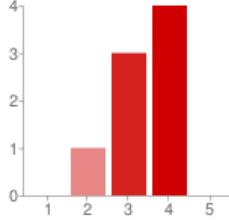


1 - Poor.	<b>0</b>	0%
2	<b>0</b>	0%
3	<b>5</b>	63%
4	<b>2</b>	25%
5 - Very good.	<b>1</b>	13%

**Comments and suggestions**

This was related to our company. - our computers -

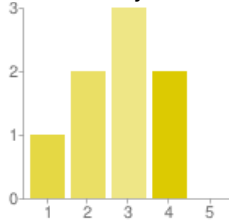
**How well was the course organized (program, registration, schedule...)?**



1 - Not well	0	0%
2	1	13%
3	3	38%
4	4	50%
5 - Very well	0	0%

**Comments and suggestions**

**How much did you learn?**

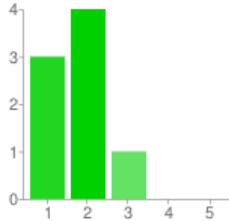


1 - Not much	1	13%
2	2	25%
3	3	38%
4	2	25%
5 - A lot	0	0%

**Comments and suggestions**

I could learn much from internet if I spent 4 days for it.

**How useful should this course be in your daily job?**



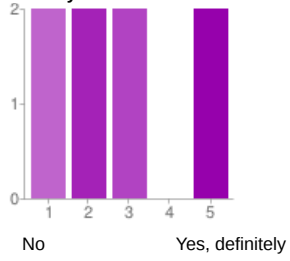
1 - Not useful	3	38%
2	4	50%
3	1	13%
4	0	0%
5 - Very useful.	0	0%

**Comments and suggestions**

I'm not doing Android development right now, but some ideas can be used on other OSs as well. Not related to my daily work.



**Would you recommend this course to others?**



1 - No	2	25%
2	2	25%
3	2	25%
4	0	0%
5 - Yes, definitely	2	25%

**Comments and suggestions**

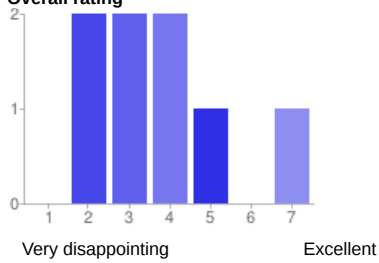
**What part(s) of the course did you like most?**

Labs

**What part(s) of the course did you like least?**

Labs. Presentations. It was difficult to follow. Therefore i can read them myself, no need reading by instructor. Presentation could be more interactive.

**Overall rating**

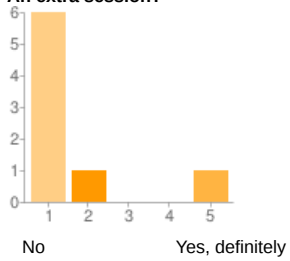


1 - Very disappointing	0	0%
2	2	25%
3	2	25%
4	2	25%
5	1	13%
6	0	0%
7 - Excellent	1	13%

**Comments and suggestions**

It could be much better if the labs were better. We put our all effort to complete the lab tasks so learning part gets less attention. improve the labs. correct errors. try it first if it works well, then put it in the lab sheet with step by step explanation.

**An extra session?**

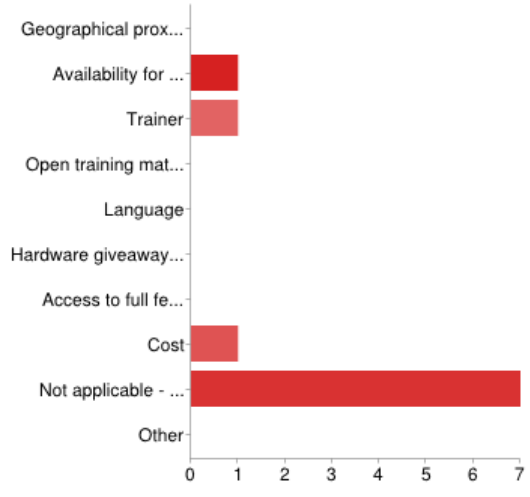


1 - No	6	75%
2	1	13%
3	0	0%
4	0	0%
5 - Yes, definitely	1	13%

**Comments**

. Not really. I will try to learn it myself. No I think - Application development no No

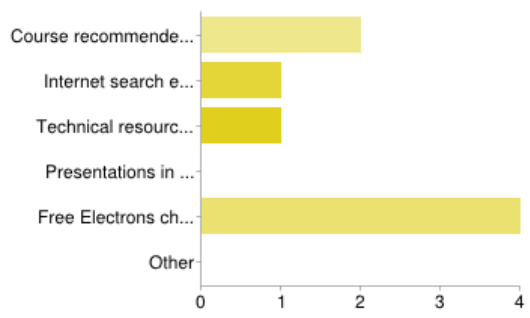
**What prompted you to choose Free Electrons?**



Geographical proximity (public sessions only)	0	0%
Availability for on-site sessions	1	13%
Trainer	1	13%
Open training materials that can be checked in advance	0	0%
Language	0	0%
Hardware giveaway (public sessions only)	0	0%
Access to full feedback from participants to previous sessions	0	0%
Cost	1	13%
Not applicable - My management made the decision	7	88%
Other	0	0%

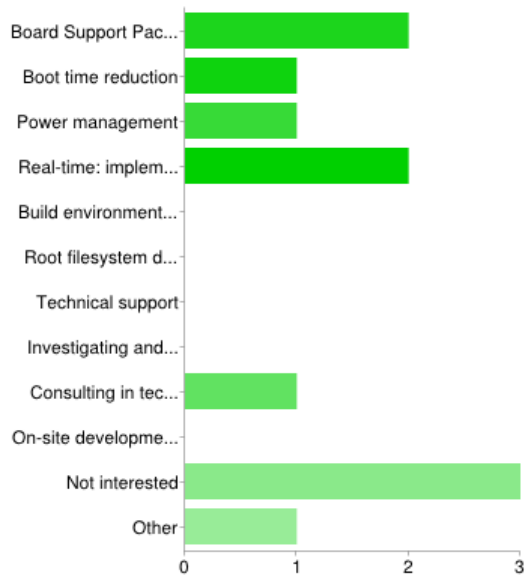
People may select more than one checkbox, so percentages may add up to more than 100%.

**How did you first learn about Free Electrons?**



Course recommended by previous participants	2	25%
Internet search engines	1	13%
Technical resources on the Free Electrons website	1	13%
Presentations in conferences	0	0%
Free Electrons chosen by my management	4	50%
Other	0	0%

**Interested in other types of embedded Linux / Android engineering services?**



Board Support Package development: make Linux / Android support your new hardware	2	2
Boot time reduction	1	1
Power management	1	1
Real-time: implementation and bug fixing	2	2
Build environment deployment and support	0	0
Root filesystem design and development	0	0
Technical support	0	0
Investigating and fixing bugs	0	0
Consulting in technology selection and methodology	1	1
On-site development, support and consulting services	0	0
Not interested	3	3
Other	1	1

People may select more than one checkbox, so percentages may add up to more than 100%.

**Comments and expectations**

The number of class was so big. It was hard for the lecturer to answer all questions in labs. The trainings

should be given to smaller groups.

