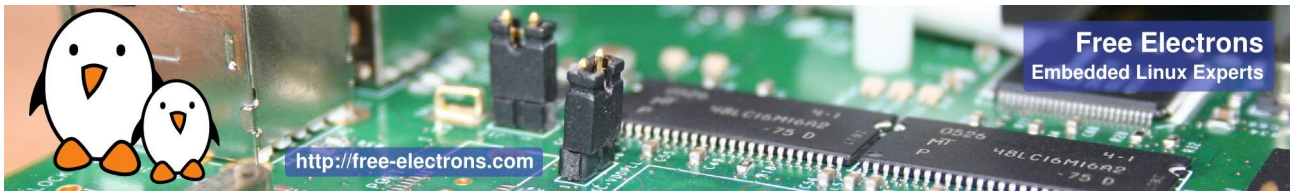


Training evaluation report

Training session: Embedded Linux Training
Training dates: June 21-24, 2010 (4 days)
Country: The Netherlands

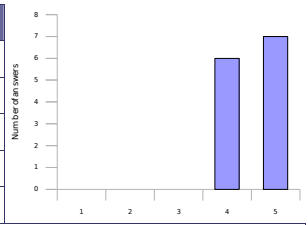
Number of participants: 14
Returned evaluation forms: 13

Thank you for having organized a Free Electrons training session!
Here is a wrap-up of evaluations from participants.

Learning objectives

1. How well did the course meet your learning objectives?

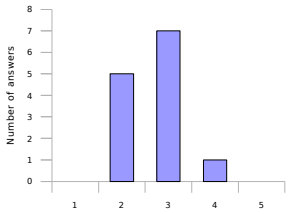
Rating	Answers	Description
1	0	Not met
2	0	
3	0	
4	6	
5	7	Fully met



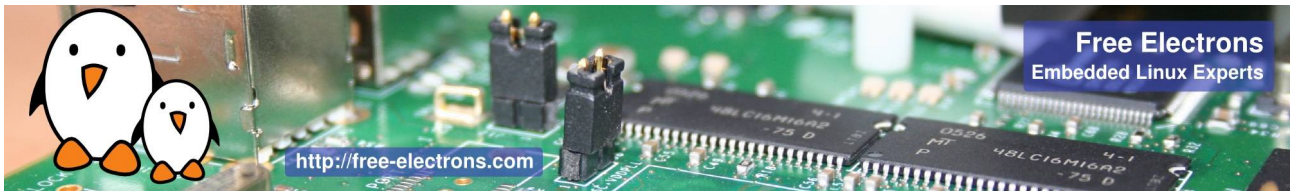
5 - Good instructions. Good didactic plan.
4 - Some topics I consider too advanced or not relevant for the course.

2. How was the duration of the course?

Rating	Answers	Description
1	0	Too short. Couldn't learn enough in such a short time.
2	5	A little too short
3	7	Just fine
4	1	A little too long
5	0	Definitely too long. The concepts could be learned in much less time.2



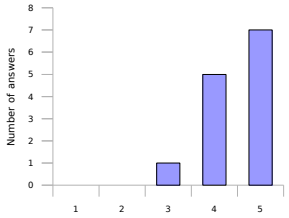
2 - Pity it had to be squeezed in 4 days - Would have liked a bit more time for labs.
4 - I think 4 days puts quite a heavy load on myself.
3 - Too little time for appdev and debugging - Too much time for all kinds of filesystems.
2 - The course material is enough to fill one more day.
2 - Missed one day due to own schedule.
3 - Would be better to have max 2 days / week.
2 - 5 days were put in 4 days.
3 - It is impossible to remember everything that I've learned, but the course gives a very good introduction to embedded Linux. Now I'm ready to use everything I've learned in practice.



Lecture materials

3. How helpful were the lecture materials?

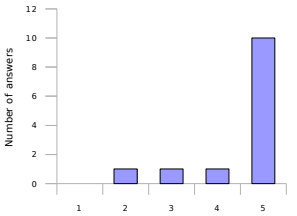
Rating	Answers	Description
1	0	Not helpful. Made things more difficult to learn and understand.
2	0	
3	1	
4	5	
5	7	Really made things easier to understand and learn.



5 - Add page numbers to printouts. Easier for “oral” referencing.
5 - Though information tends to be scattered. A howto section would be helpful for recurring tasks, e.g. mknod, NFS server, etc.
4 - Especially the lab exercises were very good!

4. Will you recommend these materials to others?

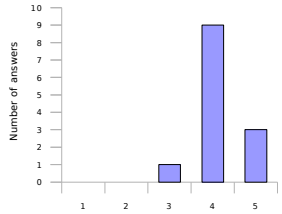
Rating	Answers	Description
1	0	No. Not helpful without following the sessions.
2	1	
3	1	
4	1	
5	10	Definitely



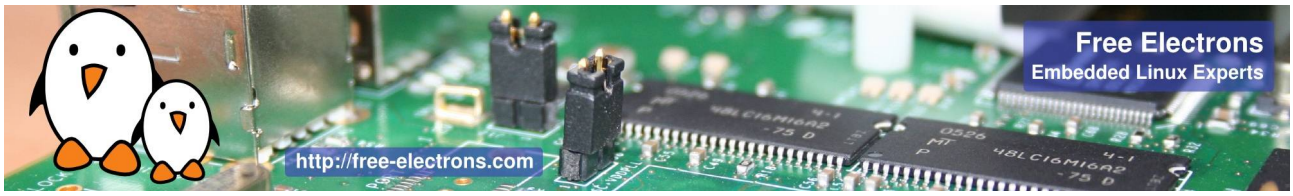
2 - You need an instructor to help you through it. After the course, I can use the material for myself, to look things up.

5. If you have Linux project opportunities, will you use these materials again?

Rating	Answers	Description
1	0	No. I will look for other sources of information.
2	0	
3	1	
4	9	
5	3	Definitely



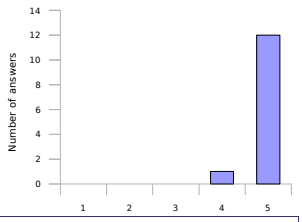
4 - Yes, unless already learned by heart.
4 - Not sure yet if opportunity is there.



Instructor added value

6. How knowledgeable was the instructor?

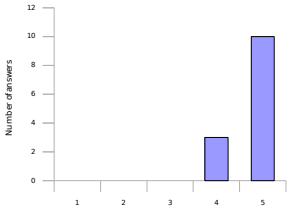
Rating	Answers	Description
1	0	Not enough for my own technical experience.
2	0	
3	0	
4	1	
5	12	More than enough for my own experience.



5 - Very lively and helpful

7. Did instructor oral explanations add value to the lecture materials?

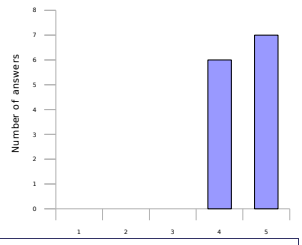
Rating	Answers	Description
1	0	No added value to reading the materials.
2	0	
3	0	
4	3	
5	10	Yes. The instructor really made very useful oral explanations.



5 - He could improve his English pronunciation.
4 - I like real world examples, and got enough. The films were not necessary, but a nice touch.
N/A - Excellent English!
5 - Michael tends to speak very fast, which leaves little time to think about what is said.

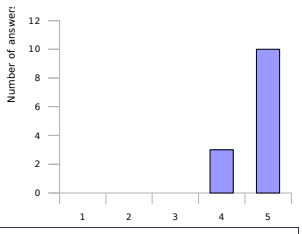
8. How well did the instructor answer questions from the audience?

Rating	Answers	Description
1	0	Poorly. Didn't try to understand the questions well or rarely managed to find useful answers.
2	0	
3	0	
4	6	
5	7	Answered very well to questions from the audience

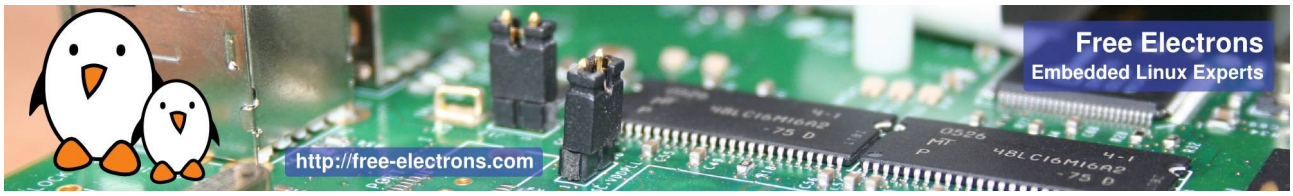


9. Was the instructor helpful with practical labs?

Rating	Answers	Description
1	0	No, not enough available and helpful during the labs.
2	0	
3	0	
4	3	
5	10	Yes. The instructor definitely helped to make labs a learning opportunity.



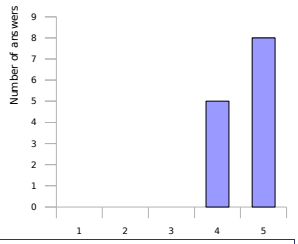
5 - It helps that the labs don't explain every little step, so you can learn from your mistakes.



Training labs

10. How useful were the training labs?

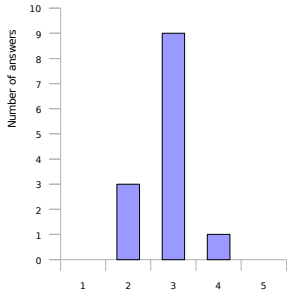
Rating	Answers	Description
1	0	Not useful. Didn't add significant value to the lectures.
2	0	
3	0	
4	5	
5	8	Very useful. Helped to highlight things not understood and build useful experience.



5 - The training labs are essential to this course!

11. How difficult were the training labs?

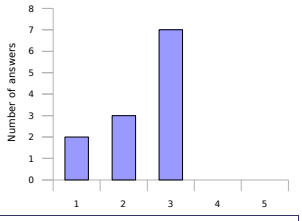
Rating	Answers	Description
1	0	Too difficult. Didn't help or even discouraged a beginner to get more familiar with the tools and concepts.
2	3	A bit too difficult. Would be better if the lab instructions gave a bit more details about explanations.
3	9	Just fine. Prompted me to look for answers, get my own experience and find my own solutions.
4	1	Too easy for my own technical level.
5	0	Too easy for everyone. Should challenge participants more and help everyone to practice on real issues.



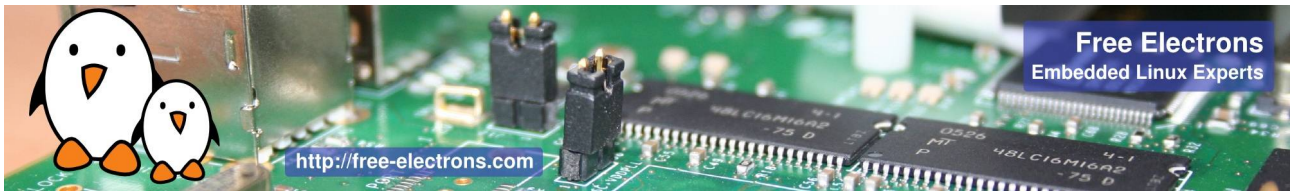
3 - It was perfect that the answers were not always on paper which made me think about what is the cause for the problem.
4 - I have had previous experience so the comparison is not really fair.
2 - I am a HW designer and Linux is new to me.
2 - You need a fairly good background in Linux to understand what you are doing. You need to know a lot of commands.
3 - The exercises were no “tutorials” but they obliged you to “think for yourself”. Very good.

12. Was enough time dedicated to the practical labs?

Rating	Answers	Description
1	2	No. More practice is needed
2	3	A little bit more time would help.
3	7	Just fine
4	0	A little bit less time would be enough.
5	0	Don't need to spend so much time on labs. On-the-job practice is best



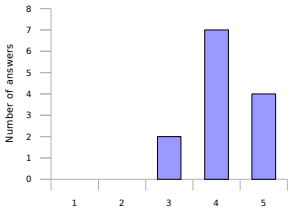
N/A - Make sure the students record their steps so they know their actual state. Use VPATH?
1 - No problem. I did most important labs.
1 - And make some labs easier? Recurrent tasks should be described in a “howto”.



Training conditions

13. How do you rate training conditions (room size, equipment, environment...)?

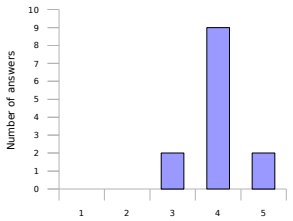
Rating	Answers	Description
1	0	Poor.
2	0	
3	2	
4	7	
5	4	Very good.



5 - There was only an issue with Internet causing downloads to become corrupt sometimes, because of multiple downloads at the same time.

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

Rating	Answers	Description
1	0	Poor. Not powerful enough to execute practical labs.
2	0	
3	2	
4	9	
5	2	Very good. Very little time waiting, more time learning.



4 - Not only slow downloads from time to time. But also problems downloading from some sites when everyone starts in parallel.

4 - Only download was often slow.

4 - No chance to turn off touchpad. Download not throtled. Blacklight of laptop flickered.

4 - sometimes network congestion. Backlight of laptops was not stable, screen flickered / dimmed often.

4 - Better to have one computer per person.

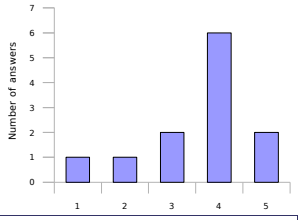
Free Electrons note: it is difficult to have one computer per person when we have more than 8-10 students. The instructor can't spend enough time with everyone, making the overall progress of the class slower.

4 - Sheets on paper are very small.

3 - Internet connection was very slow ;-)

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

Rating	Answers	Description
1	1	Not well
2	1	
3	2	
4	6	
5	2	Very well



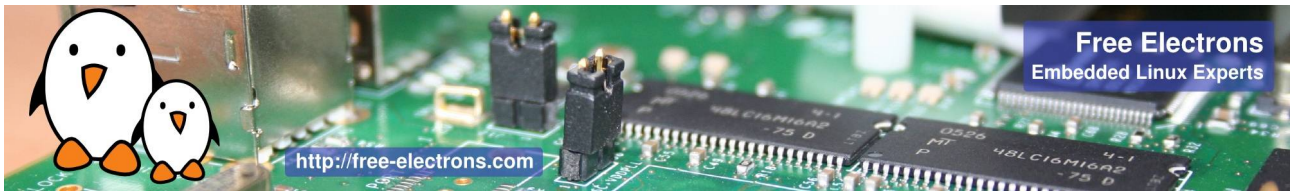
N/A - Invitation e-mail about course time was wrong. In the invitation mail this was from 9:00-17:00. The training itself was from 8:30-17:30. The room number change wasn't communicated either.

3 - The email mentioned wrong room and start time.

1- Wrong time and room was communicated. On Thursday we got chased out of the canteen.

2 - Provided classroom was invalid in email - Start time & end time provided in email were incorrect.

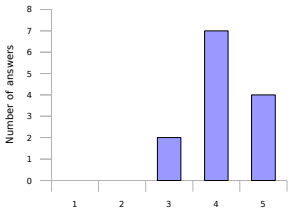
3 - Requested training document, but no answer. Looked at the Fontys website again by coincidence and found the training.



Overall rating

16. How much did you learn?

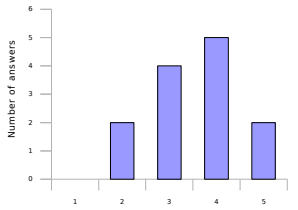
Rating	Answers	Description
1	0	Definitely not much
2	0	
3	2	
4	7	
5	4	Definitely more than I expected.



4 - Learned a lot. Did not exactly know what to expect.
3 - Although I knew most, I still learned new stuff (inner workings initramfs) :-)
4 - Sometimes it is hard to keep the overall view. Maybe an overall picture would help.

17. How useful will this course be in your daily job?

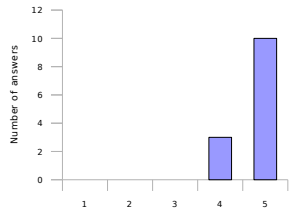
Rating	Answers	Description
1	0	Not useful.
2	2	
3	4	
4	5	
5	2	Very useful. Will make my job easier and more productive.

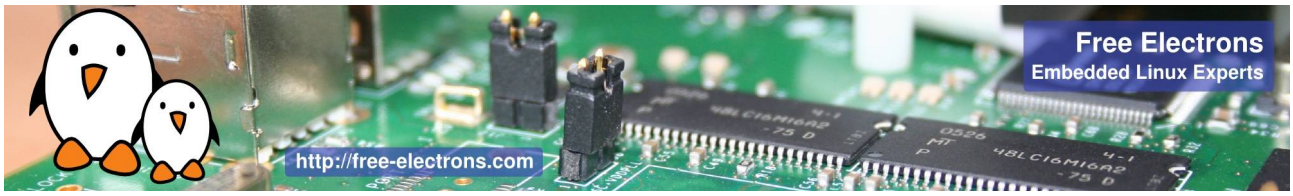


2 - Not much Linux in my job yet.
5 - Currently busy in embedded Linux
3 - I have to divide my time over several subjects; therefore not so much time left for these Linux activities.
3 - Application will have to wait :-)
5 - Even when I will not use Linux in the near future... this course helps me to understand other open source projects also.

18. Would you recommend this course to others?

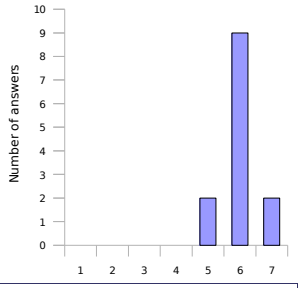
Rating	Answers	Description
1	0	No.
2	0	
3	0	
4	3	
5	10	Yes, definitely





19. Overall rating

Rating	Answers	Description
1	0	Very disappointing
2	0	Disappointing
3	0	A little bit disappointing
4	0	OK
5	2	Pretty good
6	9	Very good
7	2	Excellent



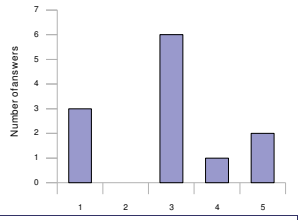
6 - Thanks for giving 4 days of fun learning!

7 - Bit more scripting using and reusing settings. Makes reusing scripts easier. Keeping toolchains up to date, finding resolutions for incompatibilities.

5 - Too much into too little time, but very good in general.

20. An extra session?

Rating	Answers	Description
1	3	No
2	0	
3	6	Why not?
4	1	
5	2	Yes, definitely



1 - Not right now.

1 - For now this will do.

4 - I would like to learn video application. development comparable to DirectShow (gstreamer ??)

1 - For the moment enough, may be BSP

3 - I don't know yet. First digest this info.

3 - But first get more familiar with the current topics.

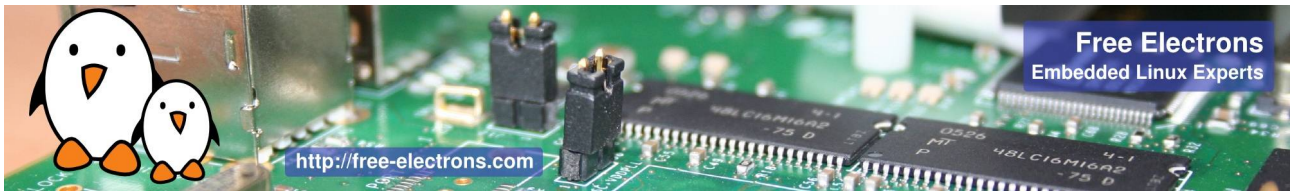
Number of votes for topics in an extra session

Understanding the Linux kernel		Linux device driver development		Linux board support packages		Embedded system development		Miscellaneous needs	
Process management	2	USB device drivers	1	Processor specific code		Lightweight tools		Java	
Filesystem implementation	2	USB host drivers	1	Board specific code	1	Embedded system development tools	2	Real-time	
Memory management	2	PCI drivers	1	Board specific interrupt support code	1	Cross-compiling toolchains		Audio	1
Scheduling implementation	2	Network drivers	1	DMA support	1	Debugging solutions		Video	2
Bootstrap code	3	Block drivers	1	Bootloader development	1	Software development tools	2	uClinux	1
		Flash drivers	1			Programming with graphical libraries	1	Voice over IP	
		I2S drivers	1			POSIX API			
		Input drivers	1			System optimization	1		
		Sound drivers	2			Root filesystem creation			
		Video drivers	2			Flash filesystem performance tuning	1		

Free Electrons comments

Thanks to the (sometimes oral) suggestions from the audience, we will improve future training sessions...

- By trying to remember to articulate better and not to speak too fast.
- By proposing a “reference sheet” with the most useful commands in the course (NFS setup, boot arguments...)
- By highlighting more the availability of backup downloads in case of downloading problems with some sites.



Life after training

After this training session, do not hesitate to get back to us! Here are things we could do to support you in your embedded Linux projects:

- More training: you may be interested in the other training sessions that we propose, either embedded Linux system development or Linux kernel and driver development, depending on the course you have already taken. See http://free-electrons.com/training for details.
- If some people in your organization missed the session, and you don't have enough requests to organize another session, they can choose to go to our public training sessions. See http://free-electrons.com/training/sessions for details.
- Linux kernel porting. Adding Linux support to your boards, or supporting you in doing this.
- Having your board support code merged in mainstream sources (Linux, U-boot), so that your sources are maintained by the community. This also means for customers that your boards will be supported for a long time.
- System development and integration. Creating demos and prototypes.
- System optimization: improving system performance and features (power consumption, speed, size...)
- Investigating and fixing nasty bugs that you don't have time to cope with by yourselves.

See http://free-electrons.com/services for details.