

## Training evaluation report

**Training session:** Embedded Linux Training

**Training dates:** Mar. 29 - Apr. 2 (5 days)

**Country:** France

**Number of participants:** 11

**Returned evaluation forms:** 10

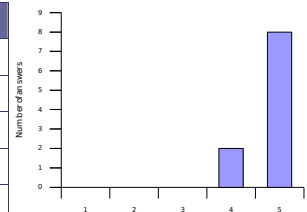
Thank you for having organized a Free Electronics training session!

Here is a wrap-up of evaluations from participants.

### Learning objectives

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

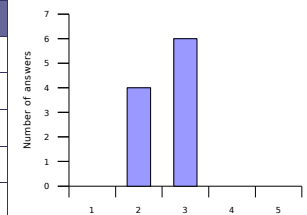
Rating	Answers	Description
1	0	Not met
2	0	
3	0	
4	2	
5	8	Fully met



5 - Excellent!

#### 2. How was the duration of the course?

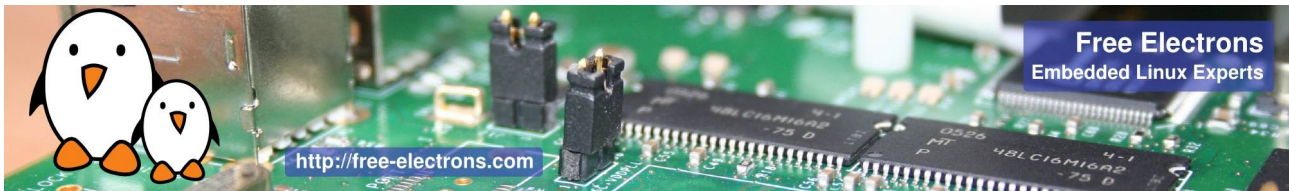
Rating	Answers	Description
1	0	Too short. Couldn't learn enough in such a short time.
2	4	A little too short
3	6	Just fine
4	0	A little too long
5	0	Definitely too long. The concepts could be learned in much less time.



2 - Short for someone like me who didn't have enough Linux basics.

2 - We want another one!

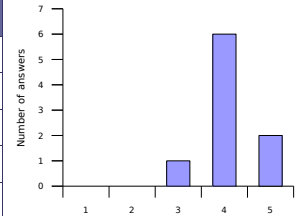
2 - A bit too short to complete the labs for a newbie.



## 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	6	
5	2	Really made things easier to understand and learn.



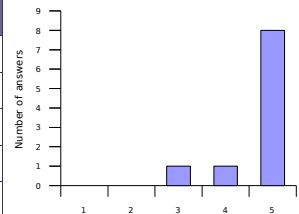
4 - Missing hardware description (CALAO board) (memory, boot options...)

3 - Need to switch between the practical and theoretical materials because the commands are often discovered during the lectures.

4 - Very very dense slides.

### 4. Will you recommend these materials to others?

Rating	Answers	Description
1	0	No. Not helpful without following the sessions.
2	0	
3	1	
4	1	
5	8	Definitely



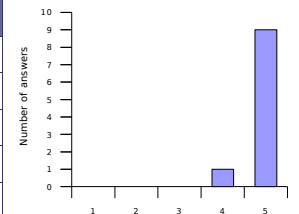
5 - Already done

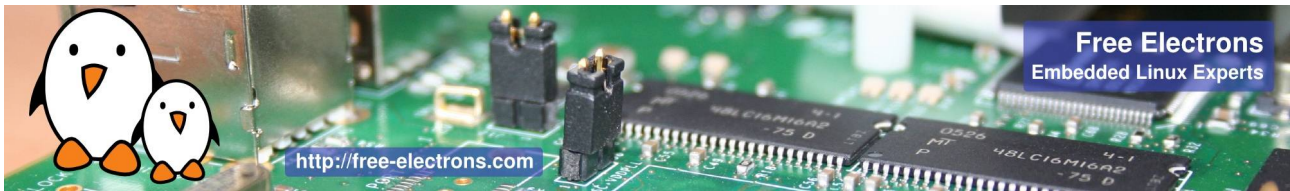
5 - It was recommended to us!

3 - It depends on their relationship with Linux. Newbies: must follow the course. Users: no problem.

### 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	0	
4	1	
5	9	Definitely

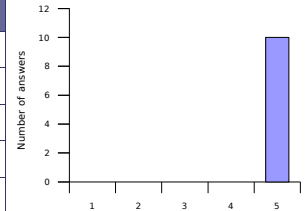




## Instructor added value

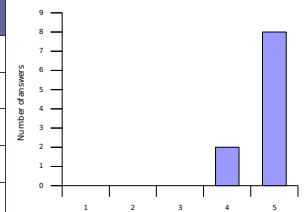
6. How knowledgeable was the instructor?

Rating	Answers	Description
1	0	Not enough for my own technical experience.
2	0	
3	0	
4	0	
5	10	More than enough for my own experience.



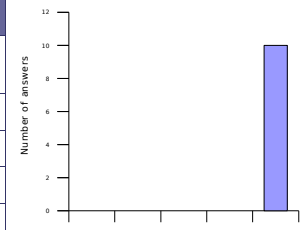
7. Did instructor oral explanations add value to the lecture materials?

Rating	Answers	Description
1	0	No added value to reading the materials.
2	0	
3	0	
4	2	
5	8	Yes. The instructor really made very useful oral explanations.



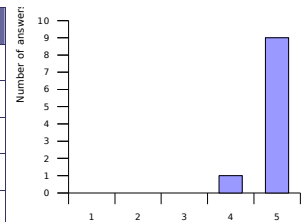
8. How well did the instructor answer questions from the audience?

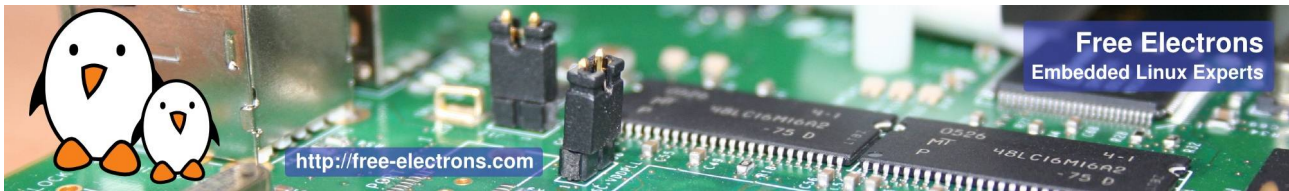
Rating	Answers	Description
1	0	Poorly. Didn't try to understand the questions well or rarely managed to find useful answers.
2	0	
3	0	
4	0	
5	10	Answered very well to questions from the audience



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	1	
5	9	Yes. The instructor definitely helped to make labs a learning opportunity.

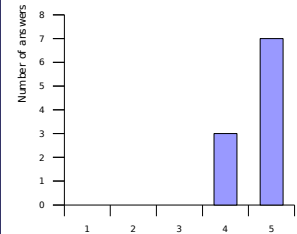




## Training labs

### 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	3	
5	7	Very useful. Helped to highlight things not understood and build useful experience.

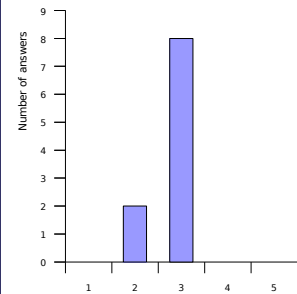


4 - A lab about GPIO stuff

4 - 4.5

### 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	2	A bit too difficult. Would be better if the lab instructions gave a bit more details about explanations.
3	8	Just fine. Prompted me to look for answers, get my own experience and find my own solutions.
4	0	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.

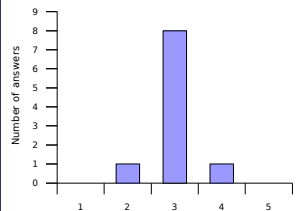


2 - Mainly in the first practical labs where there should be more details on the distinction between the board and the PC (where to make changes, add stuff...)

3 - Suggestion to add, in some labs, a diagram representing the situation that we are trying to put in place.

### 12. Was enough time dedicated to the practical labs?

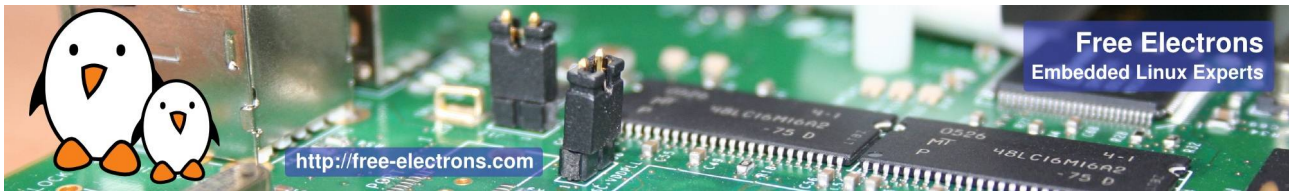
Rating	Answers	Description
1	0	No. More practice is needed
2	1	A little bit more time would help.
3	8	Just fine
4	1	A little bit less time would be enough.
5	0	Don't need to spend so much time on labs. On-the-job practice is best



3 - Time optimization: script to download all sources, run it once at the beginning to avoid delays during the labs.

*Free Electronics note: you will have to download software packages in your real life, and this is also part of the learning experience.*

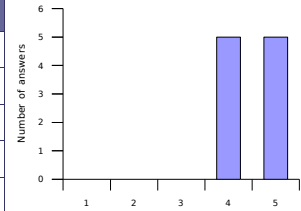
*People don't like it either when things are automated in a black box. What we can do is speed up the downloads (using the instructor's laptop as a caching http proxy, for example).*



## Training conditions

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

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



5 - Not enough room on the desk :-)

4 - Too hot!

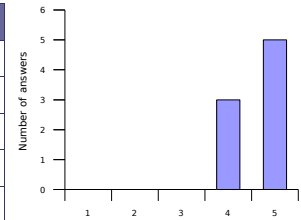
4 - OK

4 - Good. Table too small for 2 PCs + cables. No chocolate fountain this time!! :-)

4 - Table a little small. Pleasant place.

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	0	
4	3	
5	5	Very good. Very little time waiting, more time learning.



5 - Qwerty keyboard :-(

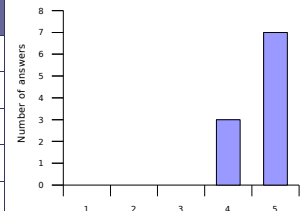
*Free Electronics note: there was an AZERTY external keyboard for everyone.*

4 - Kudos to the folding tables

N/A - Our computer

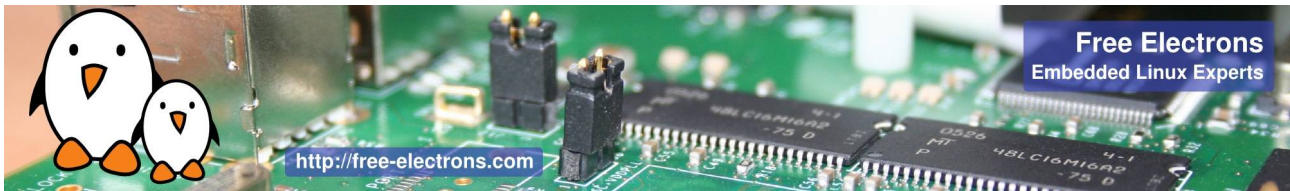
15. How well was the course organized (program, registration, meeting the schedule...)?

Rating	Answers	Description
1	0	Not well
2	0	
3	0	
4	3	
5	7	Very well



4 - OK

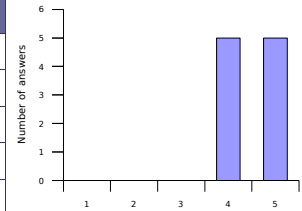
5 - Embedded Linux system development course a little bit long



## Overall rating

16. How much did you learn?

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



4 - Exactly what I expected.

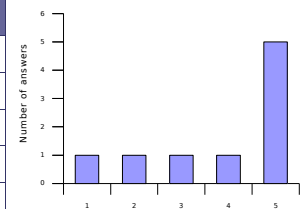
4 - Without becoming an expert, I have a broad view of what need to be done in a Linux project, and I know the issues to manage.

5 - Not in my current job, but maybe in the next.

5 - But why didn't I come earlier?

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

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

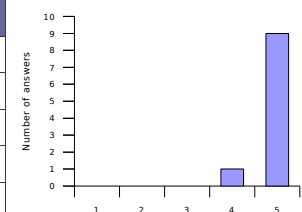


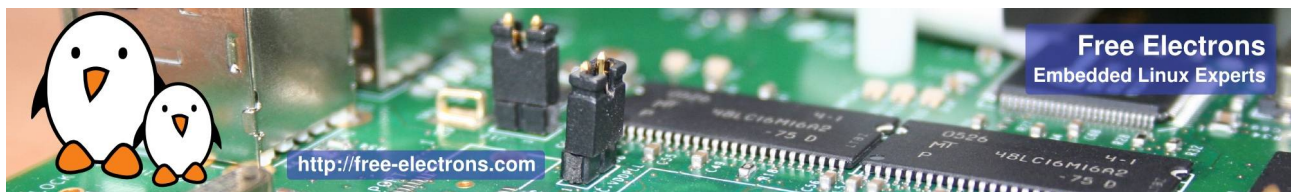
3 - Not really required for my daily job

2 - Not useful as long as I have no Linux project (service company)

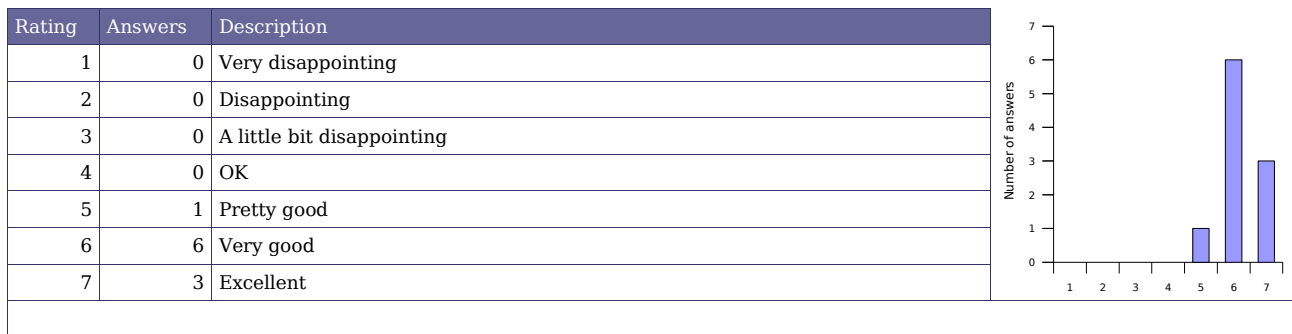
18. Would you recommend this course to others?

Rating	Answers	Description
1	0	No.
2	0	
3	0	
4	1	
5	9	Yes, definitely

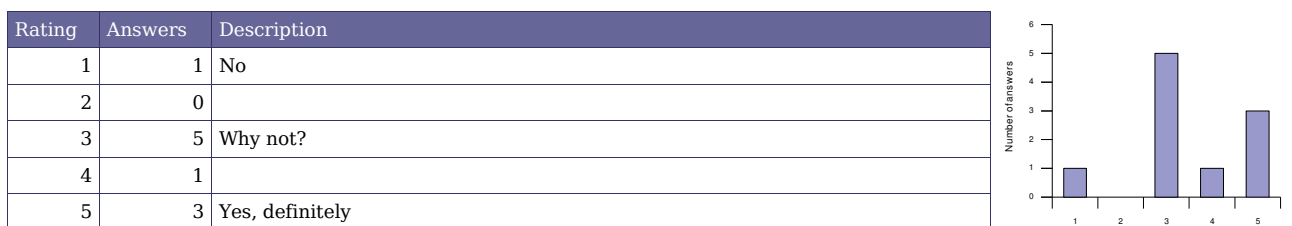




## 19. Overall rating



## 20. An extra session?



3 - If I have to work on Linux projects.

1 - This course covered most of my expectations.

3 - A private session is already planned... Wishing for more details on user application development and debugging. Blackfin platform.

## Number of votes for topics in an extra session

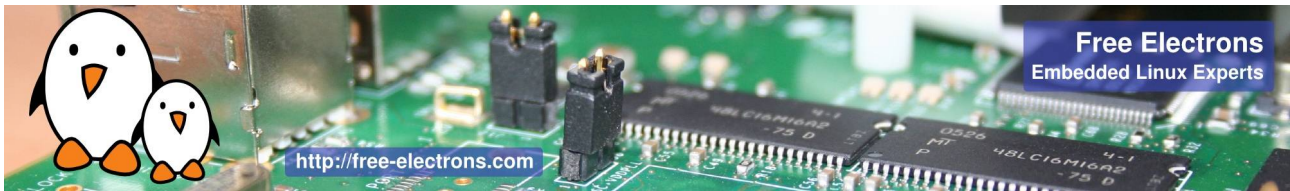
Understanding the Linux kernel	Linux device driver development	Linux board support packages	Embedded system development	Miscellaneous needs
Process management	2 USB device drivers	3 Processor specific code	1 Lightweight tools	1 Java
Filesystem implementation	2 USB host drivers	3 Board specific code	1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

## Free Electrons comments

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

- By making sure there is enough space in the training room (by limiting the number of participants)
- By clarifying what needs to be done on the PC and on the embedded target.
- By making sure that downloads are fast enough.
- By giving more details about the embedded board that we use.





## 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.