

Training evaluation report

Training session: Linux kernel and driver development
Training dates: Mar. 24 - 26, 2010 (3 days)
Country: France

Number of participants: 15
Returned evaluation forms: 14

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	2	
5	12	Fully met

Rating	Number of answers
1	0
2	0
3	0
4	2
5	12

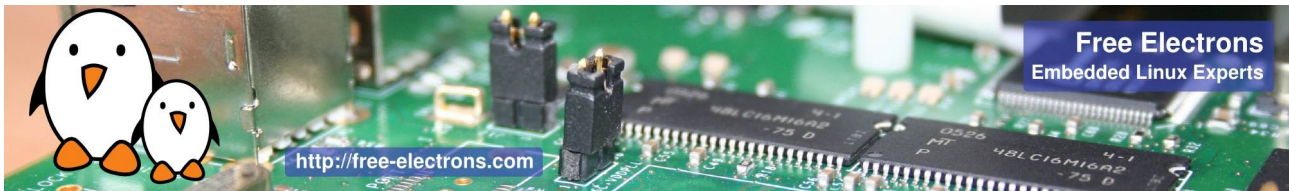
5 - Very good technical content, excellent instructor.

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	10	A little too short
3	4	Just fine
4	0	A little too long
5	0	Definitely too long. The concepts could be learned in much less time.

Rating	Number of answers
1	0
2	10
3	4
4	0
5	0

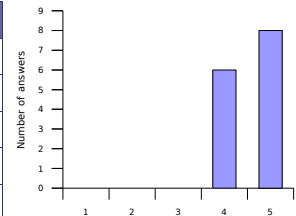
2 - Too short because too dense, which is a good thing.
2 - 5 days would be better to see more things (scheduler, etc.)
2 - There are so many interesting topics...
2 - Basic training planned for 5 days. In 3 days, this is a bit short.



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	0	
4	6	
5	8	Really made things easier to understand and learn.

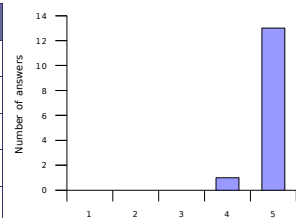


5 - A few more graphical slides might be needed (to save the paperboard)

4 - More drawings, representing connections between inode - task_struct - mm_struct - file

4. Will you recommend these materials to others?

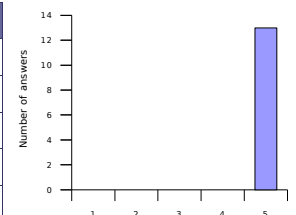
Rating	Answers	Description
1	0	No. Not helpful without following the sessions.
2	0	
3	0	
4	1	
5	13	Definitely



5 - Already forwarded.

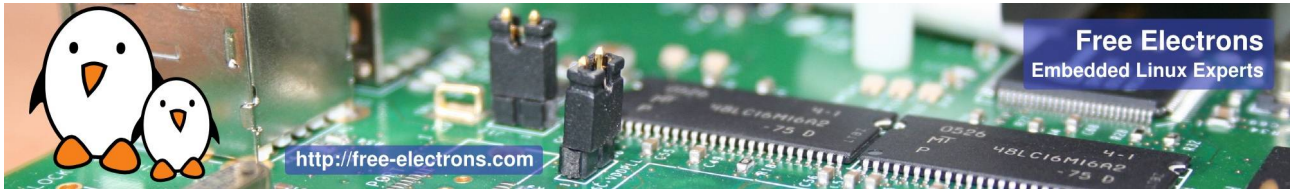
5. If you have Linux project opportunities, will you use these materials again?

Rating	Answers	Description
1	0	No. I will look for other sources of information.
2	0	
3	0	
4	0	
5	13	Definitely



5 - Paper material is useful for the presentation, but I'll use electronic support for my future devs.

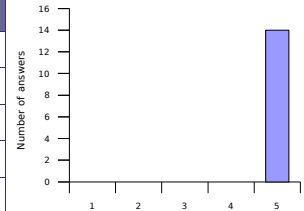
6 - Very good base for kernel development



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	14	More than enough for my own experience.

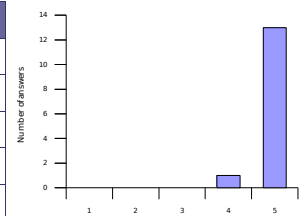


5 - Good speaker, good attitude, dynamic.

6 - Perfect.

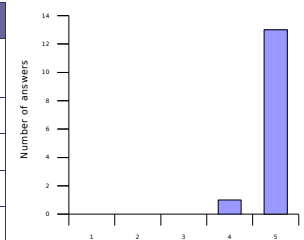
7. Did instructor oral explanations add value to the lecture materials?

Rating	Answers	Description
1	0	No added value to reading the materials.
2	0	
3	0	
4	1	
5	13	Yes. The instructor really made very useful oral explanations.



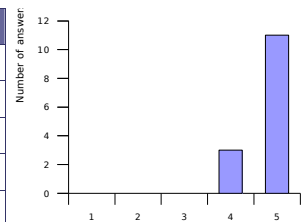
8. How well did the instructor answer questions from the audience?

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	1	
5	13	Answered very well to questions from the audience

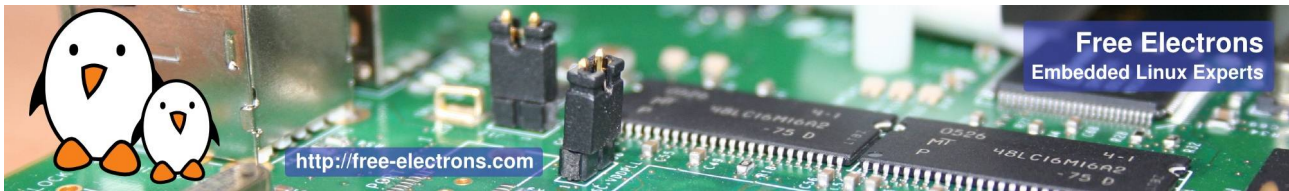


9. Was the instructor helpful with practical labs?

Rating	Answers	Description
1	0	No, not enough available and helpful during the labs.
2	0	
3	0	
4	3	
5	11	Yes. The instructor definitely helped to make labs a learning opportunity.



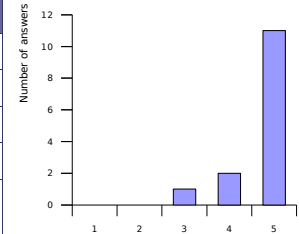
5 - Very good support!



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	1	
4	2	
5	11	Very useful. Helped to highlight things not understood and build useful experience.



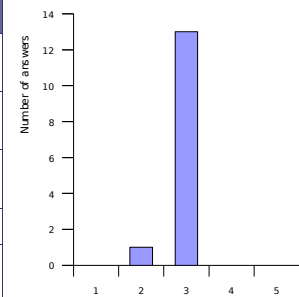
5 - Good instructions, nice progress / difficulty curve

4 - Setup of the CALAO build environment is not useful and takes a long time compared to 3 days of training.

5 - Useful and necessary

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	1	A bit too difficult. Would be better if the lab instructions gave a bit more details about explanations.
3	13	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.

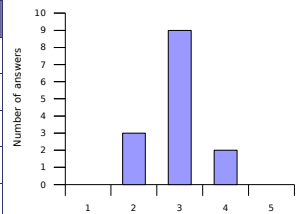


3 - I had experienced some examples, but others were unknown.

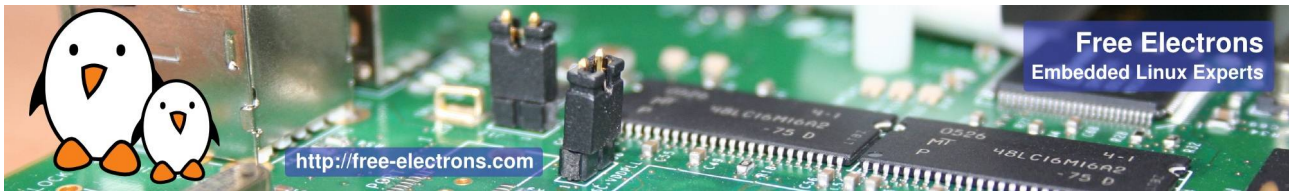
2 - IMO, bit too much "do from scratch" & re-invent the wheel. Would be nice to spend more time on examples from actual drivers.

12. Was enough time dedicated to the practical labs?

Rating	Answers	Description
1	0	No. More practice is needed
2	3	A little bit more time would help.
3	9	Just fine
4	2	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



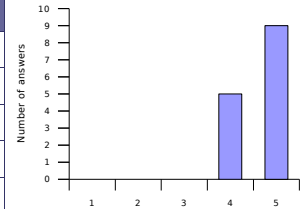
4 - Not enough on debugging techniques. A bit too much on "trial and error". Also, would be nice to work on our own laptop + using an emulator?



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	9	Very good.

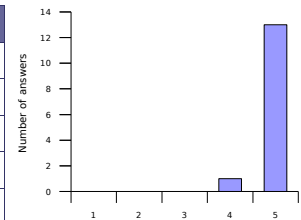


4 - Software setup more difficult than driver coding

5 - In particular the Dell D600 laptops ready with Ubuntu and all the hardware needed for the course.

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	1	
5	13	Very good. Very little time waiting, more time learning.

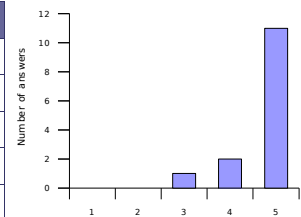


5 - Ubuntu pre-install is a good way to save time.

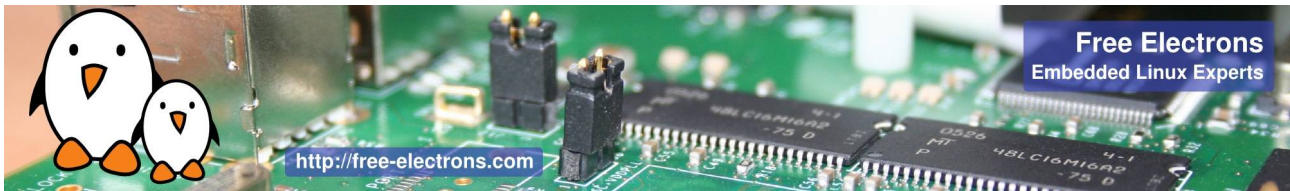
5 - Excellent embedded devices

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

Rating	Answers	Description
1	0	Not well
2	0	
3	1	
4	2	
5	11	

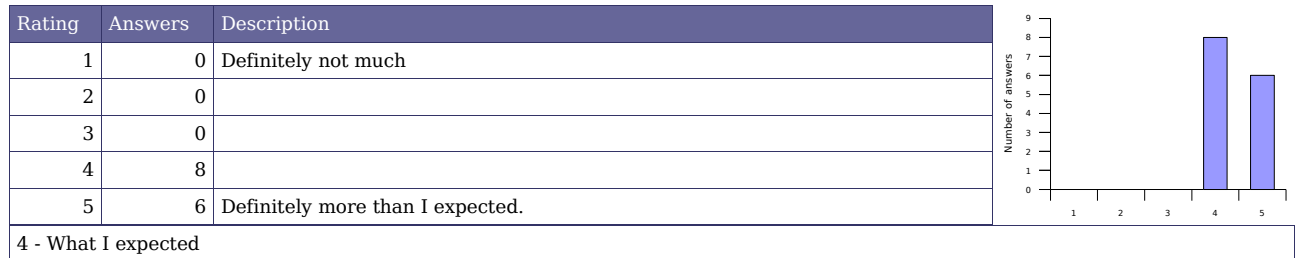


3 - 4 days should have been planned instead of 3 (but this is rather a comment for our company)

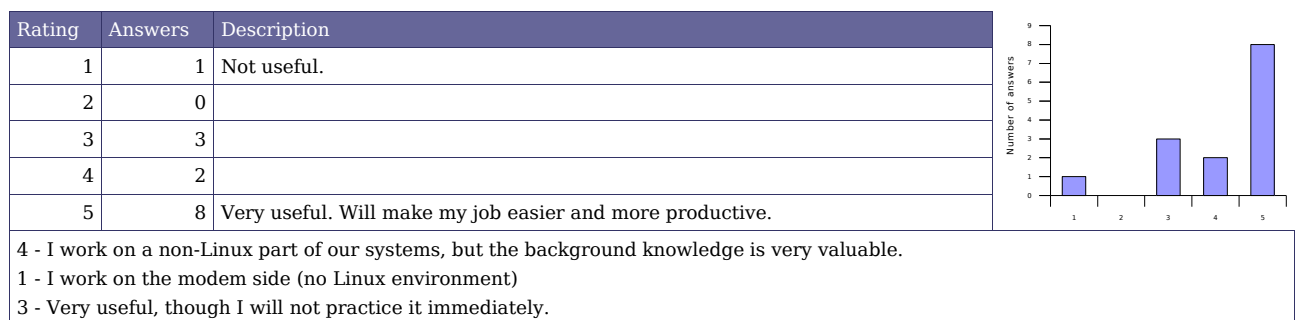


Overall rating

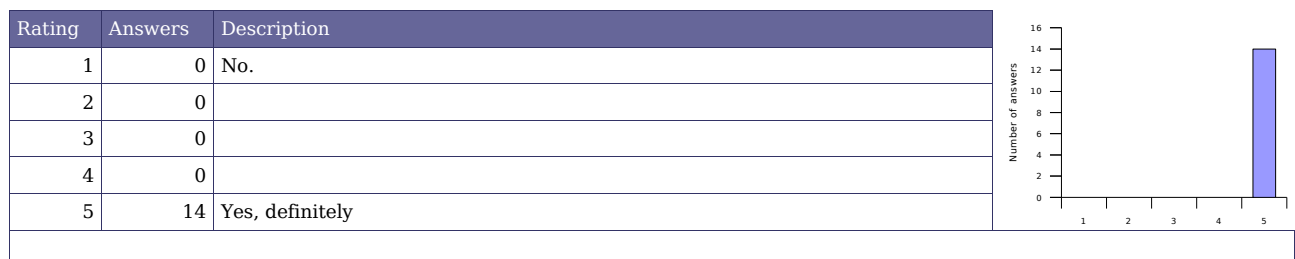
16. How much did you learn?

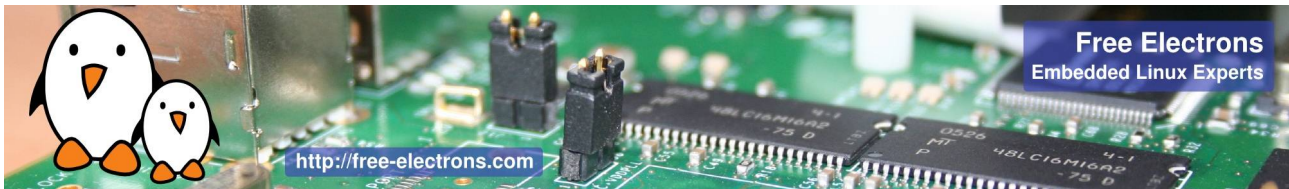


17. How useful will this course be in your daily job?



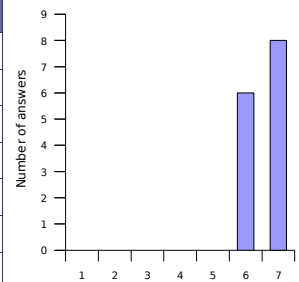
18. Would you recommend this course to others?





19. Overall rating

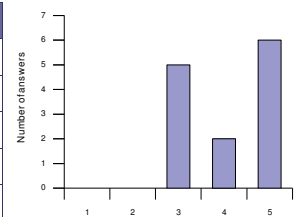
Rating	Answers	Description
1	0	Very disappointing
2	0	Disappointing
3	0	A little bit disappointing
4	0	OK
5	0	Pretty good
6	6	Very good
7	8	Excellent



6 - Really great to have received materials before the course. Thanks.

20. An extra session?

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



4 - Way too many.

5 - Just to go deeper and answer more questions

5 - Power management

5 - Mainly the end of the course (not completed)

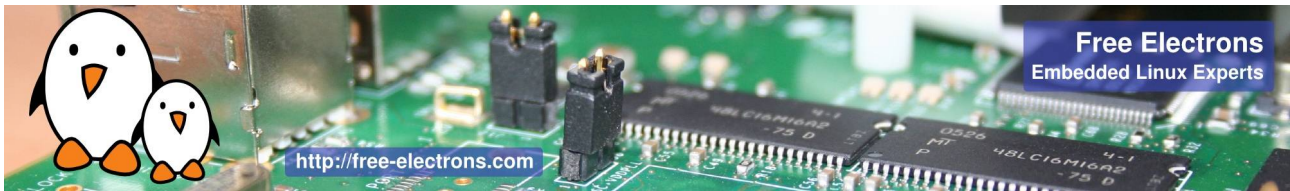
Number of votes for topics in an extra session

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

Free Electronics comments

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

- By simplifying the lab environment, to allow to spend more time on driver development.
- By adding more diagrams to our lecture materials
- By negotiating harder for a longer session, of course if this is possible for the customer.



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.