Free Electrons

Free software for
Electronic devices

Training evaluation report

Training session: Embedded Linux Training
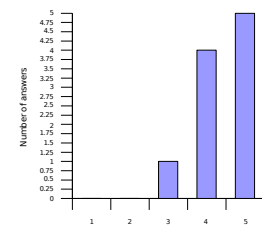**Training dates**: Feb. 6-8 2007 (3 days)

Number of participants: 13
Returned feedback forms: 10 / 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	1	
4	4	
5	5	Fully met

4 - Not fully. Too many topics were covered so many times, specially on the last day it was difficult to understand things in detail.

3 - Got brief introduction to each part of Linux & driver development. Presentation can be more effective if some graphics are added.

4 - Very well met, but this I think was due to my experience being set by your course description.

5 - It's an issue to wade into device drivers. I find books and kernel - documentation useful, but it's nice to chat with someone on the other side.

5 - Labs were useful to help enforce the concepts.

2. How was the duration of the course?

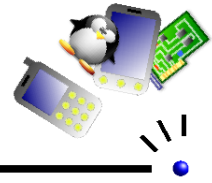| Rating	Answers	Description
1	0	Too short. Couldn't learn enough in such a short time.
2	4	A little too short
3	6	Just fine
4	0	A little too long
5	0	Definitely too long. The concepts could be learned in much less time.
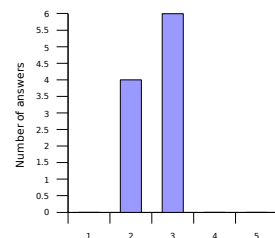
2 - Needed more time to run all the labs? But at least we did the important ones which is good.

2 - A little too short. Need to have gap more than given in between labs and lectures.

2 - Too many topics covered in short duration. Less topics covered in detail can help.
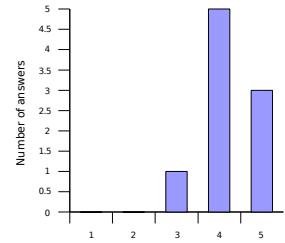
3 - Quite a bit crammed in, but pace was good.

Lecture materials

3. How helpful did you find 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	3	Really made things easier to understand and learn.

- Material was good and many useful links are given

3 - Lab materials should tell the actions in detail.
*Note from Free Electrons: the labs just tell people **what to do**, but not **how to**. This makes people get back to their slides if there is something they missed.*

3 - DMA section could be improved.

4 - Very good, more diagrams.

4. Will you recommend these materials to others?

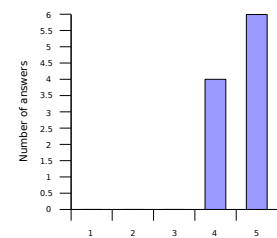| Rating	Answers	Description
1	0	No. Not helpful without following the sessions.
2	0	
3	0	
4	2	
5	7	Definitely
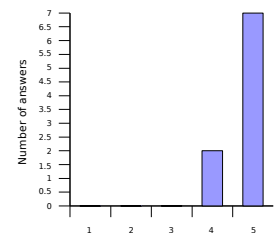
N/A - yes
5 - I will tell my friends about the Free Electrons website.

5. Will you use these materials again in the future, for command or resource references?

Rating	Answers	Description
1	0	No. I will look for other sources of information.
2	0	
3	0	
4	4	
5	6	Definitely

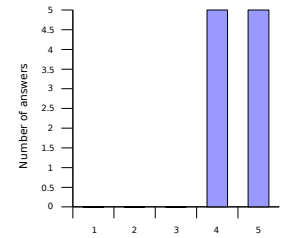5 - Definitely yes
5 - Nice references for kernel development
4 - 5 - *Note from Free Electrons: didn't manage to decipher the comment.*

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	5	
5	5	More than enough for my own experience.

4 - Good

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

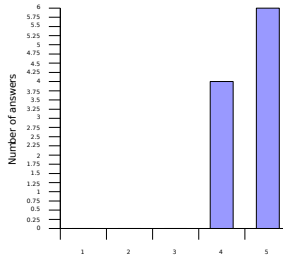| Rating	Answers	Description
1	0	No added value to reading the materials.
2	0	
3	0	
4	5	
5	5	Yes. The instructor really made very useful oral explanations.
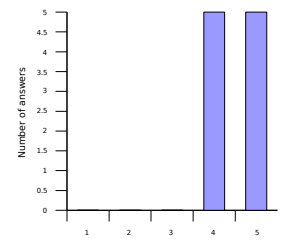
4 - Yes
4 - Should slow the pace and explain each point in more detail.

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

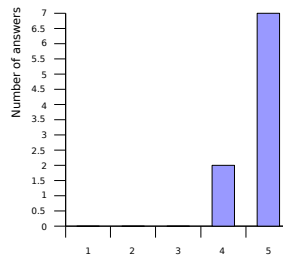| Rating	Answers	Description
1	0	Poorly. Didn't try to understand the questions well or rarely managed to find useful answers.
2	0	
3	0	
4	4	
5	6	Answered very well to questions from the audience

4 - Yes, answers were good.
5 - Well versed in embedded systems

9. Was the instructor helpful with practical labs?

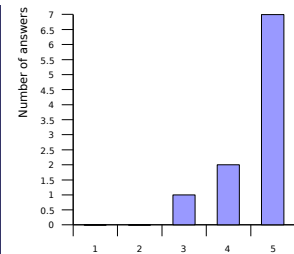| Rating	Answers	Description
1	0	No, not enough available and helpful during the labs.
2	0	
3	0	
4	2	
5	7	Yes. The instructor definitely helped to make labs a learning opportunity.

N/A - Yes
5 - Despite some issues, M.O. handled it well.

Training labs

### 10. How useful did you find 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	7	Very useful. Helped to highlight things not understood and build useful experience.

5 - Very useful, but needed more time.

3 - Are useful but the lab should have more detailed actions.

4 - I think you really wanted us to search / ask questions, as such I can appreciate the format.

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	0	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.
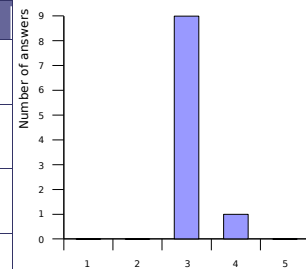
3 - Maybe look at USB flash as an alternative to CDROMs.

3 - Used the LDD3 book as some of your examples are similar.

3 - Given more labs some more complex labs would be good.

12. Was enough time dedicated to the practical labs?

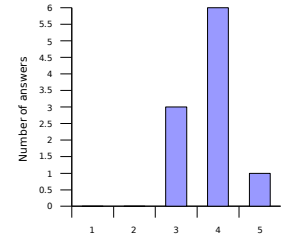| Rating	Answers	Description
1	0	No. More practice is needed
2	4	A little bit more time would help.
3	5	Just fine
4	1	A little bit less time would be enough.
5	0	Don't need to spend so much time on labs. On-the-job practice is best
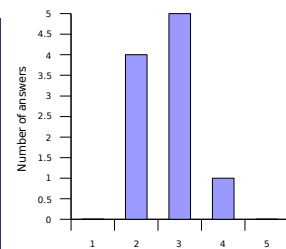
2 - Also suggest 1 computer per person. Shared computers meant one person didn't learn as much.

2 - More time and depth for the labs would be good.

2 - Problems with setting up NFS etc. resulted in labs taking longer to do!

Training conditions

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

Rating	Answers	Description
1	0	Poor.
2	0	
3	3	
4	6	
5	1	Very good.

4 - Should have more PC's
3 - We should have maybe setup better to avoid issues in the labs

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

Rating	Answers	Description
1	0	Poor. Not powerful enough to execute practical labs.
2	2	
3	4	
4	2	
5	2	Very good. Very little time waiting, more time learning.
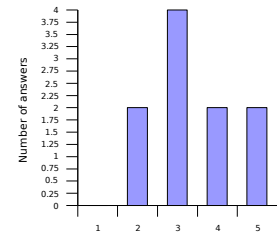
2 - Not enough. Should have one each (our fault).
2 - Just about got by. Some configuration issues in labs that held up progress.

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

Rating	Answers	Description
1	0	Not well
2	0	
3	0	
4	4	
5	6	Very well
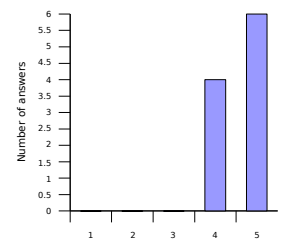
5 - Very well.

Overall rating

16. How much did you learn?

Rating	Answers	Description
1	0	Definitely not much
2	0	
3	0	
4	3	
5	7	Definitely more than I expected.
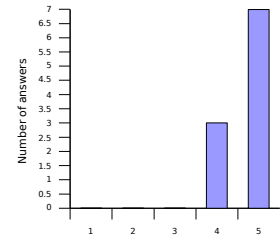
4 - Induce me to carry on.
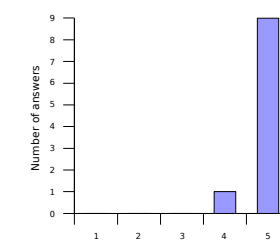
17. How useful will this course be in your daily job?

Rating	Answers	Description
1	0	Not useful.
2	0	
3	1	
4	3	
5	6	Very useful. Will make my job easier and more productive.
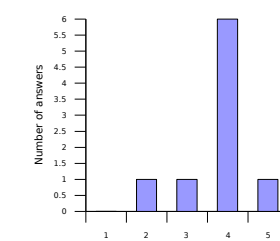
3 - Mainly interest at present.

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

Rating	Answers	Description
1	0	Very disappointing
2	0	Disappointing
3	0	A little bit disappointing
4	0	OK
5	1	Pretty good
6	5	Very good
7	4	Excellent
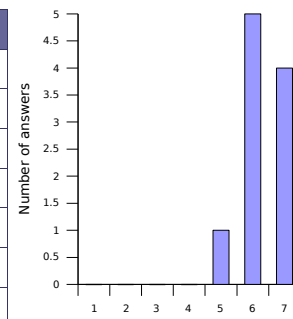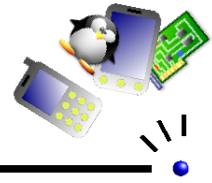
20. An extra session?

Rating	Answers	Description
1	0	No
2	0	
3	1	
4	2	
5	7	Yes, definitely
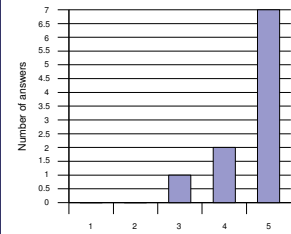
5 - Audio and video drivers
5 - Audio + video
4 - To be decided.

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	1	USB device drivers	1	Processor specific code	1	Lightweight tools	1	Java	1
Filesystem implementation		USB host drivers	1	Board specific code	2	Embedded system development tools	1	Real-time	1
Memory management		PCI drivers		Board specific interrupt support code	1	Cross-compiling toolchains	1	Audio	4
Scheduling implementation	1	Network drivers	1	DMA support	1	Debugging solutions	1	Video	3
Bootstrap code		Block drivers		Bootloader development	1	Software development tools	1	uClinux	
		Flash drivers				Programming with graphical libraries	1	Voice over IP	1
		I2S drivers				POSIX API	1		
		Input drivers	1			System optimization	2		
		Sound drivers	4			Other: root filesystem creation	1		
		Video drivers	5						

Instructor comments

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

- by adding more graphics is some sections.
- by making the DMA section clearer.
- by proposing a less aggressive agenda, leaving more time to digest new things.
- by trying to use USB flash disks instead of a cdrom. This would not only be more reliable but would also make it possible to run labs without touching the hard drives at all (useful for people using their own laptop during labs).