



## Training evaluation report

**Training session:** Embedded Linux Training  
**Training dates:** Sep. 29- Oct. 1, 2008 (3 days)

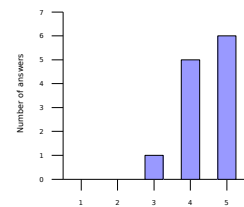
**Number of participants:** 15  
**Returned feedback forms:** 12/15

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?

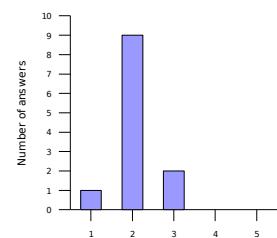
Rating	Answers	Description
1	0	Not met
2	0	
3	1	
4	5	
5	6	Fully met



4 - Too much to take in from my position of very little knowledge - needed longer.

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

Rating	Answers	Description
1	1	Too short. Couldn't learn enough in such a short time.
2	9	A little too short
3	2	Just fine
4	0	A little too long
5	0	Definitely too long. The concepts could be learned in much less time.



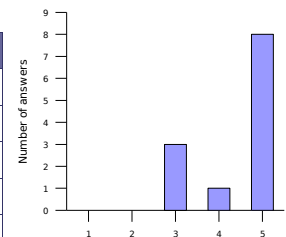
1 - Too short.  
 2 - Doing all the labs would have been better.  
 2 - Felt rushed  
 3 - A bit of unbalance between theory and labs, not bad "per se" but made it hard to schedule plans.  
 2 - Would be nice to have more time for the labs.  
 2 - We spent too much time the first day downloading the needed software. Nice to have a local mirror in class with all the stuff inside.



## 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	3	
4	1	
5	8	Really made things easier to understand and learn.



3 - Material could be more precise about the ??? and the principle background. Not the how to from the command line references to the current product would be fine. *Trainer note: didn't understand this remark.*

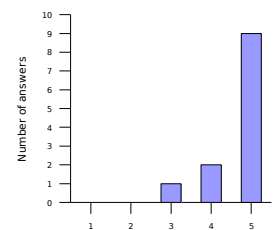
5 - Very good

3 - Maybe add more info on PPC as well as on the new powerpc tree (DTS, DTB).... it is by far the mostly used arch we have.

5 - Super

### 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	2	
5	9	Definitely

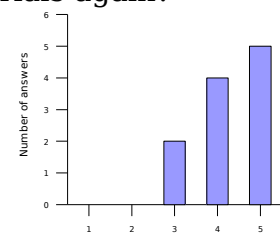


4 - To newbies

3 - Good enough to start understanding and getting practice!

### 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	2	
4	4	
5	5	Definitely



N/A - ?

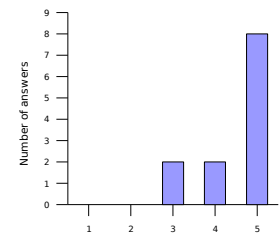
3 - Yes, but your know, we sell our solution, which is "highlevel" also...



## Instructor added value

### 6. How knowledgeable was the instructor?

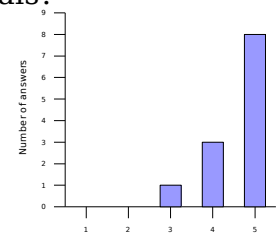
Rating	Answers	Description
1	0	Not enough for my own technical experience.
2	0	
3	2	
4	2	
5	8	More than enough for my own experience.



5 - Able to explain things in a simple way such that I could understand.

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

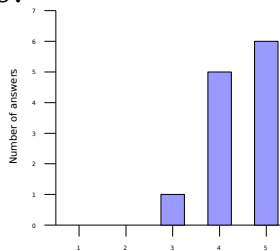
Rating	Answers	Description
1	0	No added value to reading the materials.
2	0	
3	1	
4	3	
5	8	Yes. The instructor really made very useful oral explanations.



5 - It was a bit of a challenge to keep up with the lecture and material. I think it's more of a timing issue.

### 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	1	
4	5	
5	6	Answered very well to questions from the audience



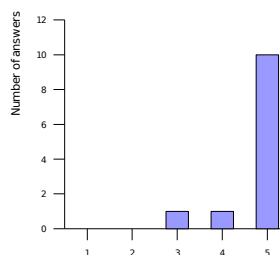
5 - Answered most questions without hesitation. Took some away - found some answers overnight. Could not ask for more.

5 - I appreciate the follow-up to the questions.

5 - Still waiting for answers on written down questions (such as XIP on non ARM CPU) . *Trainer note: answered this particular question (the participant was perhaps away at that time). However, I still have more answers to forward to participants.*

### 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	1	
4	1	
5	10	Yes. The instructor definitely helped to make labs a learning opportunity.



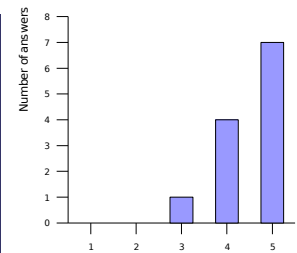
5 - Very - excellent help



## 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	4	
5	7	Very useful. Helped to highlight things not understood and build useful experience.

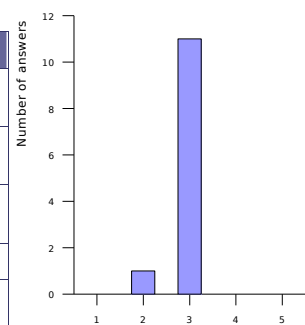


4 - Too rushed for me.

5 - Completing them all would've been much better.

### 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	11	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.

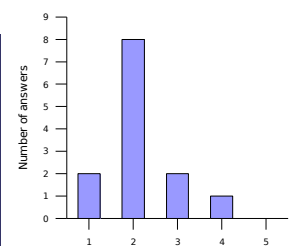


2 - Level of lab goal ok. But sometimes info missing (not mentioned in slides or time consuming flipping through slides -> command index?)

3 - OK

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

Rating	Answers	Description
1	2	No. More practice is needed
2	8	A little bit more time would help.
3	2	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



1 - No

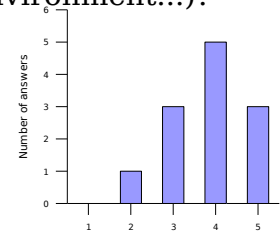




## Training conditions

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

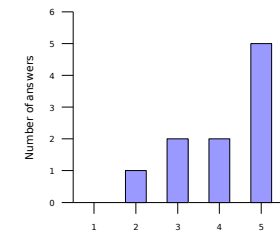
Rating	Answers	Description
1	0	Poor.
2	1	
3	3	
4	5	
5	3	Very good.



2 - Make sure downloads are working.  
 4 - Clear view  
 3 - Internet access could've been better. It'd be easier if we had the download material in flash or CD.  
 4 - Internet bandwidth was bad!  
 4 - WLAN sucked - not your fault of course :-)  
 3 - Wlan connectivity could be better. Overall WLAN throughput quite low. Tables are a little bit too small when using laptops + course material.  
 N/A

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

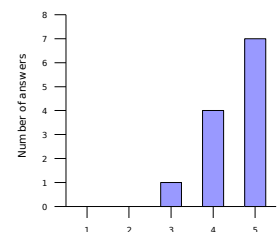
Rating	Answers	Description
1	0	Poor. Not powerful enough to execute practical labs.
2	1	
3	2	
4	2	
5	5	Very good. Very little time waiting, more time learning.



N/A - Used own - VMware worked fine.  
 5 - N/A? Own equipment  
 5 - Own equipment  
 N/A  
 2 - Kubuntu was a bit too unstable on my machine but I suspect it was my machine's fault  
 3 - We waste time trying to download stuff over Internet, adding a local mirror for apt-get would be a great idea.

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

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



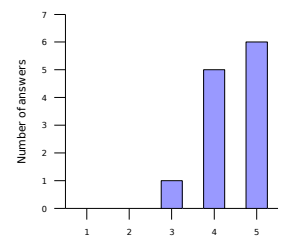
5 - Very good to do 600 slides in 3 days. However, as noted, this meant the labs were rushed.



## Overall rating

16. How much did you learn?

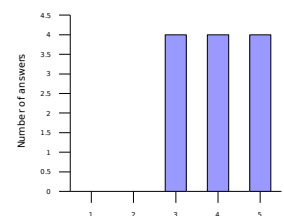
Rating	Answers	Description
1	0	Definitely not much
2	0	
3	1	
4	5	
5	6	Definitely more than I expected.



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

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

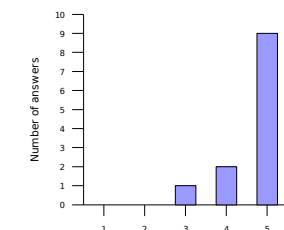
5 - Hope to have time to build on it.



18. Would you recommend this course to others?

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

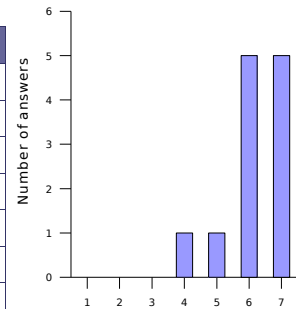
5 - Without hesitation





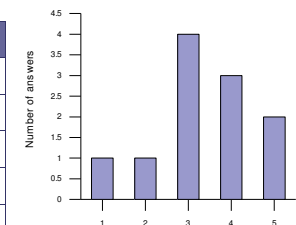
## 19. Overall rating

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



## 20. An extra session?

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



3 - Can't really answer - need to try to absorb this first.

N/A - Talk to my manager / budget :-)

2 - Not sure due to my market.

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

## Free Electrons comments

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

- By skipping the least important parts of our lectures, to keep more time for the practical labs and let people finish the most important parts of their labs.
- By coming with a "Plan B" when there are networking issues. We plan to use the instructor's laptop as a caching web proxy (with required downloads already cached). This way, people download things from the real life locations, but still enjoy fast downloads.
- By offering to spend a little bit of time on the PowerPC architecture if the audience is interested.



## 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: we can organize custom training sessions or workshops on specific topics. Examples: USB device drivers, developing multimedia systems, uClinux, BSP development...
- 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.