Gunn Diode Oscillator Minutes

David Headland

2003-10-28 09:00

Attendance

- Fourth year students
  - DP Headland
  - AJ Nelms
  - RE Irwin
  - R Wan
  - JM Higginbotham
  - MP Gaskill

Approvals

- The minutes from the previous meeting were approved.

Dress code

- Dress code was decided upon.
  - Smart trousers.
  - Shirt and tie.
  - No jackets.

Presentation to e2v

- RE Irwin experienced problems reading the Powerpoint files on the university computers.
- It was decided that current sections should be combined in A19 after the formal meeting.
- Problems were experienced getting the logo to display properly inside the PPT files. Attempts will be made to convert the logo into either a vector or a bitmap image file.
- The content of the personal slides was discussed. The format was decided as follows:
  - 4th year: *degree course.*
  - *Interests and related work experience.*
  - *3rd year project.*
- The actual style of the slides will be discussed in A19 so proposed changes can be quickly implemented and commented upon.

Microwave risk assessment

- Based on information provided from the Occupational Health web site.
- A detailed risk summary has been produced.
- Warning signs will be required in the lab.
- Restricted access to the workspace will need to be established whilst working with the oscillators.
- The minimum safe working distance in a straight line from the waveguide to an eye has been calculated to be 2.8 m.
- Nobody should *ever* look down a waveguide.
- The rest of the body has much less strict distance requirements that the eye.

Project risks

- An example critical path analysis graph was presented.
- Project should be able to do similar analysis itself — this will be investigated over the next couple of days, and the results will be reported at Thursday's meeting.

Waveguide vs planar circuits

- A paper describing a method for waveguide power combining using an overmoded waveguide and a serial of individual waveguide oscillators was presented.
- Few papers describe in any detail the reasons for choosing waveguide over planar circuits or vice versa.
- Priestley's paper describes the designing of a planar circuit to overcome many of its problems. This does, however, require much more design skill than a waveguide-based oscillator.

Meeting time adjustment

- A motion was proposed to move the start of the Tuesday meetings to 10:00 to aid travel arrangements for certain people and reduce dead time for students with afternoon lectures.
- The motion was passed unanimously.

Proposed actions

All	Check assigned sections for any required modifications:	
	JM Higginbotham	Sections 2 and 3.
	DP Headland	Section 6: Power combining, frequency and phase locking.
	RE Irwin	Section 5.

	MP Gaskill	Section 3: Power supplies.
	R Wan	Section 6: Diode biasing.
	AJ Nelms	Section 4.
RE Irwin	Check with WS Truscott for travel arrangements.	
DP Headland	Bring in copies of driving license for insurance purposes.	
MP Gaskill	Present the risk assessment to R Sloan for approval and check for access to a working oscillator for testing purposes.	
MP Gaskill	Check what sign will be required for the lab.	
MP Gaskill	Mail a copy of the current logo and associated fonts to DP Headland	
DP Headland	Convert the logo into a more useful and portable format for inclusion in the presentation.	
AJ Nelms	Collate information gathered into a set of slides and mail to DP Headland for inclusion in the presentation.	
All	Provide possible questions to ask e2v Technologies.	
DP Headland	Provide the latest presentation on the web site, and keep up-to-date with any future changes.	
RE Irwin	Check the facilities on offer at e2v Technologies: computers and projectors.	
All	Provide suggestions for information to be added into the conclusion.	

Next meeting

Time	Thursday, 30 October, 14:00
Place	D-floor coffee room

Meeting adjourned, 11:49.