

DSP application in ultrasound analysis

Client:

Dr. Scott B Reeder
Medical Physics and Radiology
Phone: (608) – 265-9964
Email: sb.reeder@hosp.wisc.edu

Dr. Walter F Block
Biomedical Engineering and Electrical Engineering
Phone: (608) 265-9686
Email: wfblock@wisc.edu

Catherine D G Hines
Radiology
Phone: (608) 265 – 9688
Email: gard@wisc.edu

Team:

Bogdan Dzyubak (Team Leader)
Joe Helfenberger (BSAC)
Nick Balge (BWIG)
Matt Parlato (Communicator)

Progress Report for October 9 – October 15

Problem Statement:

The goal of this project is to develop an MRI phantom for the quantification of fat. This phantom will be used to test MRI techniques developed by the client for the imaging of fat *in vivo*. The phantom must contain samples of known physiologically relevant quantities of fat. The eventual purpose is quality control of MRI scanners that use fat-water contrast imaging.

This Week's Goals:

- Receive final fat fraction specifications from Dr. Reeder
- Meet with Catherine Hines and tour the lab with volumetric equipment
- Determine the exact funding procedure
- Finalize the choice of oils and other components
- Prepare the presentation

Next Week's Goals:

- Determine the funding procedure
- Work on the paper
- Order materials (tentatively)

This Week's Accomplishments:

- Met with Catherine Hines and toured the lab
- Received final fat fraction specifications from Dr. Reeder
- Made a drawing of the prototype and calculated the size
- Made a preliminary selection of materials
- Prepared the presentation

Project Difficulties:

- No significant difficulties.

Team Activities

Date	Members	Activity	Time Spent
10/09/09	Team	Team meeting	1.00 hr
10/10/09	Matt	Communication	
10/11/09	Team	Prototyping, calculations of dimensions	3 hr
10/11/09	Nick	Material Purchasing	2 hr
10/12/09	Team	Meeting with Catherine	1 hr
10/13/09	Joe	Individual presentation work	45 min
10/13/09	Team	Presentation work	2 hr
10/13/09	Matt	Presentation work	1 hr
10/13/09	Bogdan	Presentation work	2 hr
10/13/09	Bogdan, Joe	More presentation work	2 hr
10/14/09	Joe	Individual presentation work	4 hr
10/15/09	Joe	Solidworks model	4 hr
10/15/09	Matt	Presentation, paper, communication	2.5 hr
10/15/09	Nick	Presentation work	
10/15/09	Team	Presentation work	2.5 hr

Project Schedule

Task	September				October					November				December		
	3	10	17	24	1	8	15	22	29	7	14	21	28	5	12	17
Project Development																
Research																
Brainstorm/Design Development																
Finalize Design																
Prototyping																
Deliverables																
Progress Reports																
Mid-semester Presentation (10/16)							*									
Final Paper (12/11)															*	
Final Poster (12/4)													*			
Meetings																
Client																
Advisor																
Website																
Online																

* = deliverable due

Expenses

None so far.