Project Plan

Thesis: Real-Time Rendering of Translucent Materials with Directional Subsurface Scattering

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Week Number			**Planned Activities**	**Details**
week 6	03-02-14	09-02-14	Literature study	Cascaded Light Propagation Volumes [Kaplanyan et. Al.] - studied approach to lattice-based translucency. Also looked at [Børlum et al.] with a possible approach with SSLPV (Subsurface Scattering Light Propagation Volumes)
week 7	10-02-14	16-02-14	Literature study	Numerical validation of the model simulating it on a python-based simulation framework. Started comparison of the studied models in order to decide which one is the
week 8	17-02-14	23-02-14	Implementation	Choice of the actual method. Basic implementation on the chosen framework of some auxiliary classes (Materials, Lights, SH calculation routines). Start research
week 9	24-02-14	02-03-14	Implementation	Code: Configured debugger, added basic point light/directional light system, refactored the framework to be more general. Started implementing version of Directional Dipole. Works on planes, to test on spheres. Theory: Tried to devise a numerical condition to optimize shader calculations (if distance more than d, discard Documents: Updated introduction, corrected some mistakes, added references and an image.
week 10	03-03-14	09-03-14	Implementation	Trying to apply the naïve method to spheres and cubes, then extending to general geometry. Start implementation of conservative rasterization, first step
week 11	10-03-14	16-03-14	Implementation	Continuing implementation of the rendering method.
week 12	17-03-14	23-03-14	Implementation	Concluding basic implementation.
week 13	24-03-14	30-03-14	Implementation	Eventual extensions of implementation (different types of lights, heterogenous materials…)
week 14	31-03-14	06-04-14	Implementation	Eventual extensions of implementation (different types of lights, heterogenous materials…)
week 15	07-04-14	13-04-14	Validation and optimization	Low level optimization of the code/shaders

week 16	14-04-14	20-04-14	Validation and optimization	
week 17	21-04-14	27-04-14	Validation and optimization	Comparison with naïve method on different conditions.
week 18	28-04-14	04-05-14	Validation and optimization	Timing comparisons with other existing methods.
week 19	05-05-14	11-05-14	Validation and optimization	
week 20	12-05-14	18-05-14	Validation and optimization	
week 21	19-05-14	25-05-14	Writing	Started final writing of the thesis (reordering notes taken throughout the thesis). Introduction chapters and
week 22	26-05-14	01-06-14	Writing	Description of our actual method.
week 23	02-06-14	08-06-14	Writing	Description of our actual method.
week 24	09-06-14	15-06-14	Writing	Results and validation.
week 25	16-06-14	22-06-14	Writing	Results and validation.
week 26	23-06-14	29-06-14	Writing	Reharsal.
week 27	30-06-14	06-07-14	Final Handin week	