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 best way to go.
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 on the actual rendering method
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 contribution) **Writing**: Updated introduction, corrected some mistakes, added references and an image.
week 10	03/03/14	09/03/14	Implementation	**Code:** Trying to apply the naïve method to spheres and cubes, then extending to general geometry. Start implementation of conservative rasterization, first step of the method. **Writing:** Writing summary of related work section, with the most relevant papers outlined.
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 previous work.
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	