Tasso Karkanis

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SKILLS

- Proficient in C/C++, Perl, OpenGL, Unix Development and Administration
- Familiar with MFC, Java, Network Development
- Fluent in German

PROJECTS

MSc. Thesis, "Curvature-Dependent Implicit Surface Tiling", University of Toronto
Implicit surfaces are more difficult to polygonize than parametric surfaces. Previous work in this area is based either on fixed-grid samplings of the surface which can produce degenerate triangles and does not take detail into account, or global relaxation techniques which can be computationally expensive. This approach is a greedy algorithm which uses local estimates of curvature to produce a tiling of near-equilateral triangles with appropriate edge lengths.

Virtual Reality Trainer, Defence and Civil Institute of Environmental Medicine
Participated in the development of a prototype of a networked virtual reality trainer. With this trainer, the Officer of the Watch cons a virtual ship using a head mounted LCD and speech recognition/synthesis systems. Wrote the predictive head tracking system, the real-time IrisGL display, the GUI for the instructor's station, and the expert system for computer-guided additional ships. Developed a simple modelling package with which 4 models of ships were built.

Software Reengineering, Netron Inc.
Rewrote in C++ a language processor which is the core technology component of Netron's product, a powerful software construction system. Initial development was done on OS/2, and then ported to Windows NT, Linux and Solaris. Implemented optimizations providing a 10-fold speedup over the previous version.

System Integration, University of Toronto
Partially responsible for maintaining a lab of 30 machines running IRIX, Linux, MacOS, Solaris, and Windows NT. Implemented Linux-hosted MacOS and Windows NT file serving via Netatalk and Samba. Deployed a Windows NT domain including roaming profiles with Samba.

WWW Ticket Sales System, Netron Inc.
Participated in the development of a prototype for a theater ticket sales system. Wrote a Java front-end which displayed a seating plan of various venues from which the user can select the desired block of tickets. The client communicated with C servers running on Unix. Also developed some Perl CGI scripts.

EMPLOYMENT HISTORY

Oct 1997 – Present	**System Administrator** (part-time), Dynamic Graphics Project, University of Toronto
Feb 1999 – May 1999	**Private Tutor**, (tutored OAC Calculus student)
May 1994 – May 1999	**Software Engineer**, Research and Development, Netron Inc.
Sept 1997 – Jan 1999	**Teaching Assistant**, University of Toronto
Sept 1993 – Dec 1993	**Research Assistant**, Department of Chemistry, University of Waterloo
Sept 1992 – April 1993	**Programmer/Analyst**, Human Factors, Defence and Civil Institute of Environmental Medicine
Jan 1992 – April 1992	**Programmer/Analyst**, Human Factors, Defence and Civil Institute of Environmental Medicine
Sept 1987 – April 1988	**Piano Accompanist**, Ballet Etc.

EDUCATION

Present — **University of Toronto**, Toronto, Ontario
- Candidate for Master of Science (Computer Graphics) Degree

Sept 1990 – Apr 1995 — **University of Waterloo**, Waterloo, Ontario
- Honours Bachelor of Science (Physics) Degree

Sept 1985 - June 1990 — **Appleby College**, Oakville, Ontario

ACADEMIC AWARDS

- NSERC Graduate Scholarship
- Computer Science Graduate Program Entrance Scholarship
- NSERC Undergraduate Scholarship
- Consistently on Physics Department Dean's Honour Roll
- Undergraduate Award based on academic standing; first and second year
- Physics Entrance Scholarship based on SIN Contest achievement
- Governor General's Bronze Award; Appleby College

PUBLICATIONS

Tasso Karkanis, "Curvature-Dependent Implicit Surface Tiling", MSc Thesis, University of Toronto, (to appear).

A. J. Stewart and Tasso Karkanis, "Computing the approximate visibility map, with Applications to form factors and discontinuity meshing," Eurographics Rendering Workshop, June 1998.

Tasso Karkanis, A. J. Stewart, "Implicit Surface Triangulation by Region Growing", Graphics Interface Poster Abstract, June 1999.

T. Karkanis, M. Dulick, Z. Morbi, J.B. White and P.F. Bernath, High Infrared Emission Spectrum of InF, Can. J. Phys. 72, 1213-1217 (1994).

INTERESTS

- Ballroom Dancing, Motorcycling, Filmography, Literature
- Piano (Performer's Degree from Trinity College, London, England)
- Squash, Cycling, Volleyball, Weight Training