Position: Software Technical Director

Reports to: Pipeline Supervisor

Position Description:

A **Software Technical Director** works with a group of software developers that focus on the research, design, efficient implementation, and technical support of production pipeline technology and and infrastructure tools used to create films.

This includes contributing to the development of core libraries, custom applications, plug-ins, asset and resource management software and other duties as necessary. It also involves investigating new research and new technology from the CG field and prototyping/implementing it into the studio's pipeline.

A qualified candidate will have a comprehensive understanding of software engineering, software life cycles, continuous integration and build and release methodologies. The successful candidate will be a team player and will be able to work effectively with a diverse a team of artists, technicians and software developers.

Principal Duties and Responsibilities:

- Research, design, develop and test production tools, pipeline core libraries, DCC plug-ins, asset management software and infrastructure tools and solutions used for animated feature films.
- Work with the Pipeline Supervisor, CG Supervisors, the Core TD, Back-end TD, and Front-End TD teams to ensure production and pipeline requirements are met.
- Help establish continuous integration standards, development and release process.
- Development and maintenance of core libraries and APIs including scene description libraries, view-port rendering plug-ins, material binding and rendering code.
- Development of DCC plug-ins that enable the pipeline data-flow and artist work-flows.

Requirements:

- Degree in Computer Graphics, Computer Science, Engineering, Mathematics, Physics or equivalent work experience.
- Comfortable with mathematics, 3D mathematics and reading white-papers or research from the graphics field (e.g. from universities, SigGraph, etc.).
- Experience in developing tools, and implementing process improvements in active production environments.
- Works well in a team environment.
- Extensive knowledge of Python, C++ and libraries (e.g. Boost, STL, Qt).
- Experience with multi-threaded development and optimization (e.g. Intel TBB and C++ profilers).
- Experience with GPU accelerated code (i.e. OpenCL, CUDA) is a plus.
- Experience with VFX APIs such as Maya API, Alembic, OpenGL, DirectX, RI Spec, Cortex, OpenSubdiv, OpenVDB is a plus.
- Experience writing plug-ins for Maya is a plus.
- Experience with relational databases such as MySQL or PostgresSQL is a plus.
- Experience with IP transport layer protocols is a plus.
- Experience with Mercurial, Git, SVN or Perforce.
- Some experience with real-time shaders such as GLSL, HLSL, Cg is a plus.
- Working knowledge of computer graphics processes and techniques is a plus.
- Outstanding problem-solving skills under pressure.
- Very comfortable within a Unix / Linux environment.
- Strong verbal and written communications skills.
- Strong object oriented programming skills, software architecture and design methodologies.
- Shell scripting experience (c-shell, bash, etc.).
- Experience in games industry and knowledge of game engines (e.g. Unreal Engine, CryEngine and Unity) is a plus.

Education

B.S. or M.S. in Computer Science, Engineering (or equivalent) is preferred.