

# Michael Kang

michael3d.kang@gmail.com

<http://kjune.com>

## Software Engineer

Analytical

Efficient

Organized

Focused and Driven

An accomplished Software Developer with professional expertise in the areas of VR, Mobile, 3D and Game. Bachelor's degrees in Physics and Computer Sciences and Master's course in Media Technology completed. 8 years industry experience (6 years specializing in product lead roles). 25 projects completed including design, implementation and testing of software products in following platforms:

### Professional Expertise

<b>Software Development</b> Design, Estimate, Plan, Implement and Test software products	<b>Consulting/Customer Service</b> Get with the customers to realize the need and requirements	<b>Multi platform</b> MS Windows, Mobile(WIPI-C, GIGA), POSIX(IBM-AIX, Sun Blade), Mac
<b>Language</b> C/C++, C#, STL, Boost Python, Perl, OpenMP	<b>3D Graphics</b> OpenGL/GLES, Direct X, nVidia Cg, HLSL, GLSL	<b>3D/Game Engine</b> Unity3D, Ogre3D, Woori Engine, mVR Engine, Lux Render,
<b>Windows Development</b> Win32 API, MFC, Active X, COM, Extreme Toolkit	<b>Web programming</b> PHP, JavaScript, HTML, flash	<b>Database</b> MySQL, MSSQL, ODBC, ORACLE
<b>Development Environment</b> Visual Studio, XCode, Code Warrior, GCC, GDB, xlc_R	<b>Project Management</b> Agile, Trac, SVN, CVS, Dokuwiki, CruiseControl.net, Clearcase	<b>Performance Tuning and TDD</b> Compuware Devpartner, VLD, gDebugger
<b>Install Systems</b> Install Shield, NSIS,	<b>3D DCC development</b> 3DS Max script, OpenMaya API, FCollada, MEL	<b>DCC Tools</b> Maya, Photoshop, Illustrator, 3DSMax

### Selected Accomplishments

- **Next Gen GIGA Project:** Established new SKT GIGA Class 4 standard featuring 2D and 3D graphics, float/fixed point math, 3D sound, vibrations, motion sensors and external game controllers. This required collaborating with many hardware vendors and international organization. After establishing the standard, whole suites of the testing procedure and test application is provided to qualify the handsets
- **ATI Mobile 3D Integration:** Collaborated closely with ATI and ported many features of ATI Imageon 238x chips. Implemented ATI API to GIGA Extensions. Ported "Rooms Demo" of ATI into SKT WIPI-GIGA platform and demonstrated in ATI PCI board.
- **SKT Consulting:** Provided technical guidance to SKT in the international collaboration with standard organizations like Khronos groups, OMA (Open Mobile Alliance) Game Service group. Supported with technical analysis to the GxG service, SKT's Premium mobile 3D game service.
- **Technical Support of Premium Mobile 3D Game:** In order to provide support to mobile 3D game developers, we provided the MSDN like web site called WIPI-Gem, many seminars about GIGA game platform and the mobile 3d game course in Game Academy
- **mVR Framework:** Designed and implemented the mVR framework for the SK Telecom. Implemented the PC based Shader Engine component of the framework with nVidia Cg and OpenGL. Shader performance analysis and tuning is conducted with nVidia's FX Composer and Graphic Remedy's gDebugger.

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**Professional Experience****Game Programmer / Manager**Leap In Entertainment *Vancouver, B.C, Canada*

2007 ~ 2009

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*Developer of Virtual Reality 3D Social Networking Site, <http://www.justleapin.com>*

- Designed and implemented the game component of browser based 3D game with Unity3D engine featuring object manipulation, media deployment, download manager, character animation and web interface module.
- Modified the Unity3D engine source code to expand the features such as asset caching and additional texture compression and built own plug-in application.
- Managed and lead the game team of 3 developers and collaborated with web team and art team.

**Team Lead Engineer / Manager**SK Innoace *Seoul, S. Korea*

2005 ~ 2007

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*Mobile platform developer and R&D firm for SK Telecom. Official provider of WIPI and GIGA mobile game platform*

- Participated in the design of the entire mVR (mobile Virtual Reality) system and took the charge of the implementation of the PC based shader engine module using OpenGL, nVidia Cg as well as GPU performance tuning and analysis.
- Presented seminars on the advanced gaming environment and SK Telecom services at various locations, including Qualcomm Tech Seminar held at San Jose, California, March 2006.
- Established and managed the support for the mobile 3D game developers by consulting and providing tutorials and solutions via the developer support website, Wipigem(<http://wipi.innoace.com>) and instructed 3D Mobile Game Development course at the Game Academy funded by Korean government.
- Provided technical guidance and consultation on SKTs GxG Premium Game Services. Development of new markets for SK Telecom and technical liaison between game companies and hardware vendors.
- As a part of GIGA Class 4 project, established and revised GIGA specifications, the mobile game platform specialized in 3D graphics and game related special features. Implemented the features to the WIPI-GIGA Emulator and provided the hardware adaptation kit to the manufacturer and WIPI-GIGA SDK to the mobile game developer.
- Collaborated internationally with standardization organizations such as Khronos group and OMA and hardware vendors like Immersion, Yamaha, TI, Microsoft , nVidia and ATI
- Participated in Next Generation GIGA project with ATI. Reviewed the advanced features of ATI Imageon 238x chip and made the WIPI-GIGA contents run on the ATI PCI board through the emulator and ATI PCI board. Ported "Rooms demo" of ATI into WIPI-GIGA application.

## Professional Experience

### Team Lead Engineer / Assistant Manager

Youl Systems Inc., Seoul, S. Korea

2002 ~ 2005

*Industrial CAD and VR Company provides customized solutions for government, nuclear power plants, construction industry and enterprises*

- Responsible for designing, overall job distribution and core implementation of KZ3D engine targeted for game and interior VR market featuring 3D model converter, image loader, scene partitioning module, user design module, GUI module, math module, and hardware shader.
- Developed extra features to Walkinside™ from VRContext and integrated it into IPIMS, a power plant design mainframe of KOPEC, a power company. Excellent communication and leadership skills and extensive knowledge in 3D application and COM were essential.
- Led and implemented “Web based 3D house design system” for Posco Construction Corporation where users can design houses on the web. It required ActiveX, OpenGL and communication with ASP, MS SQL and design data repository.
- Led and implemented the project of “3D subway station facility management system” for Korea Subway Corporation. It involved World Up programming, database manipulation, multiple 3DS Max file(.3ds) parsing and manipulation
- Developed “Samsung Digital Palace” for Samsung Electronics, a virtual simulation program demonstrated home networking features of Samsung appliances.

### Software Developer (Co-op)

TMI Seoul, S. Korea

2001 ~ 2001

- Developed 3D avatar telephony in mobile phone with SK telecom WI-TOP. Implemented software T&L engine and rasterizer in ARM7 based hardware.

## Professional Development

**Media Technology, MS Candidate**, Sogang University, Seoul, S. Korea 2002

**BSs Physics**, Chonbuk National University, Chonbuk, S. Korea 2000

**BEs Computer, Information and Communication Engineering**, Chonbuk National University, S. Korea 2000

## Other Skills

Fluent in English and Korean.

English proficiency tests: TOEIC (955), CBT TOEFL (270) and IELTS General (7.0).

Mandatory 2 years military service with US army (outsourced from Korean army) as a Sergeant.

## References

Available upon request