

Inner Action Corporation Needs Your Help!

About Inner Action

Inner Action is a real-time 3D graphics consulting and product development company in San Francisco. We have consulting projects with companies such as Trimble Navigation, KLA Instruments, Credence Systems Corporation and Sense8 Corporation. We were responsible for developing WorldToolKit for Windows (with a lot of help from Sense8, of course). We also helped develop Sense8's Sailing demo at Meckler VR'95. This VR demo simulates a sailboat ride in the San Francisco Bay complete with head tracker, steering input from a tiller (handcrafted by Sense8 President, Tom Coull). You can even hear the sail flutter if you are sailing straight into the wind!

As far as our company philosophy, we don't have Jaguars as company cars, we don't have executive wash rooms or expansive conference rooms. We don't have a vacation policy - you take off when you want for as long as you want (provided your projects are on schedule). We don't have a dress code (in fact you don't even have to wear clothes if you don't want to).

What we do have is a great environment to work and play - with sharp programmers in the heart of the most beautiful city in the world. To be successful in this environment, it's best if you can let your hair down and get a little crazy. We need self-starters who create their own opportunities, their own projects and aren't afraid to tackle tough problems. We hear from a lot of candidates that they want a challenging work environment. If that's the case, you'll thrive in our environment. And if you dread the thought of working for a big, beaurocratic organization with eighteen levels of management but feel you have to work in such a company in order to get the right experience, think twice. We have both internal projects and consulting projects with the small and large companies alike. We have a flextime work schedule which means you can work when you want and where you want. We realize people sometimes need to work on *** their *** schedule to be productive, so if you work best from 2 pm to 11 pm, then that works fine for us. For example, if you don't have any client meetings for a week, you can take off to Yosemite, Europe, India, the beach wherever. If there's work you have to get done, you can take one of our laptop Pentiums with you. Of course, it would be helpful to the rest of our team if you could keep in touch with our office via email in case we need your help.

About Our Product, 3D Web Builder

We are also developing an internal product through our sister company, 3D Web™. This product is called Builder. Builder is a scene layout tool for authoring 3D scenes on the Web. Right now the product is in beta and it enables you to build a VRML compliant scene all from within one MS Windows desktop. Whats' VRML? If you haven't heard of VRML, you might want to check out the

spec at the following web site: <http://vrm1.wired.com/vrm1.tech/vrm110-3.html> or do a net search for vrm1 and you'll find plenty of links. But for right now, VRML stands for Virtual Reality Modeling Language and is a file specification for describing 3D scenes or worlds on the Internet. So VRML is similar to HTML with a 3D twist.

So for example, if you owned a sculpture museum and you had 3D models of all the sculptures in your museum you could build a 3D museum which included all of the 3D files of your sculptures.

This is how you would use Builder to create your 3D Museum for other to visit from your web site. When you launch Builder, you have five windows on your desktop: (1) a 3D Viewer window (this is where you view the real time rendered 3D scene), (2) the Object Master window (where you pick objects and group them) and three other windows called Ortho Views. The Ortho windows allow you to move your sculptures in one of three planes: the xy plane (front view) , the yz plane (side view) and the xz plane (top view). This is convenient if you want to move Michelangelo around the 2nd floor of your museum without dropping him off the second floor onto the ground floor.

Keep in mind that you are working within a fully rendered 3D scene. So instead of working with your models in wireframe like you would in 3D Studio, you can assemble a scene where the objects are fully rendered up to 30 frames per second while you move your sculptures around (this frame rate depends on the complexity of your model. You can add spotlight to the scene to accentuate Michelangelo's features, add cameras and apply textures to these objects (although VRML doesn't support textures, yet!). You can stretch an object along any axis, scale the object larger or smaller, align objects (i.e., place a Michelangelo EXACTLY on his mantle), add 3D text and even arrange objects into groups for easy manipulation (i.e., if you want to move both Michelangelo and his mantel as an one object). Then once you have assembled your museum, you can save it in a VRML file format and upload the file to your website. You would call it something like museum.wrl. When a person visits your web site and clicks on the HTML link called "Visit my 3D Museum." It would launch a VRML browser (assuming they have a VRML browser; some of the VRML browsers available on the net is Template Graphics Software's WebSpace or Intervista Corporation's WorldView. You will get a VRML browser from 3D Web for free at or around Christmas 1995). You could then walk through this museum. Right now, though, you can not interact with any of the objects and none of the objects move, but those features are on the way. However, you can portal or link to other 3D scenes by clicking on a 3D object. If that person owns any 3D input or output devices such as stereoscopic head mount displays or 3D mice, then they can use these devices with Builder.

Our scene layout tool is selling right now in beta form for \$99 and includes a free upgrade to Release 1 and free upgrades of Release 1 from our web server for up to one year. It runs best on a 486-50 or better running Windows 3.1 or 95. To recap, Builder enables you to import 3D objects, enlarge the objects or arrange them any way you like, then save your scene as a VRML compliant file. All this from one MS Windows desktop. There is currently no other released product which allows you to do all this under MS Windows. All the other programs require you to work with multiple programs or own an SGI machine (or you could send your 3DS files to a service bureau on the Internet and they will send you back a VRML file; the disadvantage to this is that you can not edit the VRML file).

You can view screenshots of Builder at our Web site: <http://www.best.com/~3dweb>. Soon you'll be able to download a complete working copy of the product for free off of our web site. It will offer all of the features of the \$99 product except you won't be able to save VRML files.

Opportunities at Inner Action

When you join our company, you'll get real world experience with the latest tools such as RenderMorphics, Sense8 WorldToolKit 2.04 for Windows, Open Inventor, realtime 3D games development and VRML tools development and VRML world building.

Right now we're looking for software engineers who want to work with our clients developing realtime 3D Graphics applications. If you think this is how companies should operate, please respond. All positions are permanent at our offices in San Francisco. Work-at-home is OK as long as you're available to come into the office every so often.

Thanks,

Mike Conduris

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Send resumes or URL's to:

3dweb@best.com

*** Software Engineer ****

RenderMorphics Project

Requirements: Knowledge of any one of the following: Rendermorphics or similar realtime 3d rendering library; OpenGL; extensions to OpenInventor; MS Windows (MFC, VC++)

Ideal: 3d math background; OpenGL (matrices, quaternions, transformations, etc)

*** Software Engineer - 3D Modeler ***

Develop a vertex-based modeler which renders in realtime (WYSIWIG). This will probably be an extension of a public domain modeler.

Requirements: 3d graphics; lots of GUI; ability to produce visually appealing GUI

Ideal: MFC; Visual C++; Windows NT; OpenGL; sense8; SGI; Motif

*** VR Applications Engineer ***

Develop VR applications using Sense8, Rendermorphics.

Requirements: Realtime 3d application development; 3d math

Ideal: MFC (Microsoft); Visual C++; physics background

*** Multi-User VR Applications Engineer ***

Requirements: Knowledge of 3d rendering library; previous multi-user VR application development

Ideal: Network protocols such as ATM; TCP/IP; Client-Server; RPC; telephony; frame relay

*** VRML Browser ****

Develop a VRML browser (VRML spec is on the web; search for vrml then click on vrml spec);
Design the communication link between the VRML browser and NetScape. This may involve learning
Hot Java.

Requirements: Compiler Engineer or previous experience developing a parser

Ideal: MS Windows; DDE; OLE; Hot Java; ability to write a MS Windows DLL or OLE 2.0 control