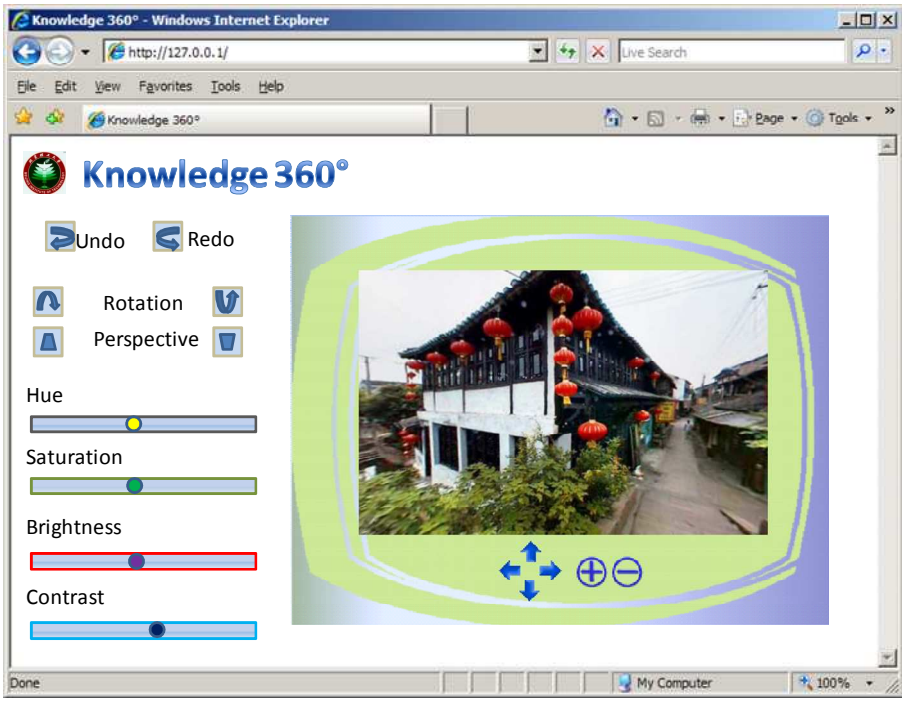
With a panoramic view on history

The Knowledge 360° Panorama System

History lessons are fun, or at least they should be fun. But repetitive and dull classes do little to spur the student's interest. History if taught only with "Somebody did something at some time" is another factor that makes history dull. If history can be presented at its full glory, to see the places these persons were, feel the atmosphere of the surroundings, history will show its full charm. Sometimes schools organize trips to museums, or sites of historical interest to make lessons more attractive. These trips come at a cost though, they are usually expensive and time-consuming, and some places are not fit for, or cannot be visited. For example, the burnt Yuanming Yuan is but a shadow of its former self, and many more places are forever lost to us.

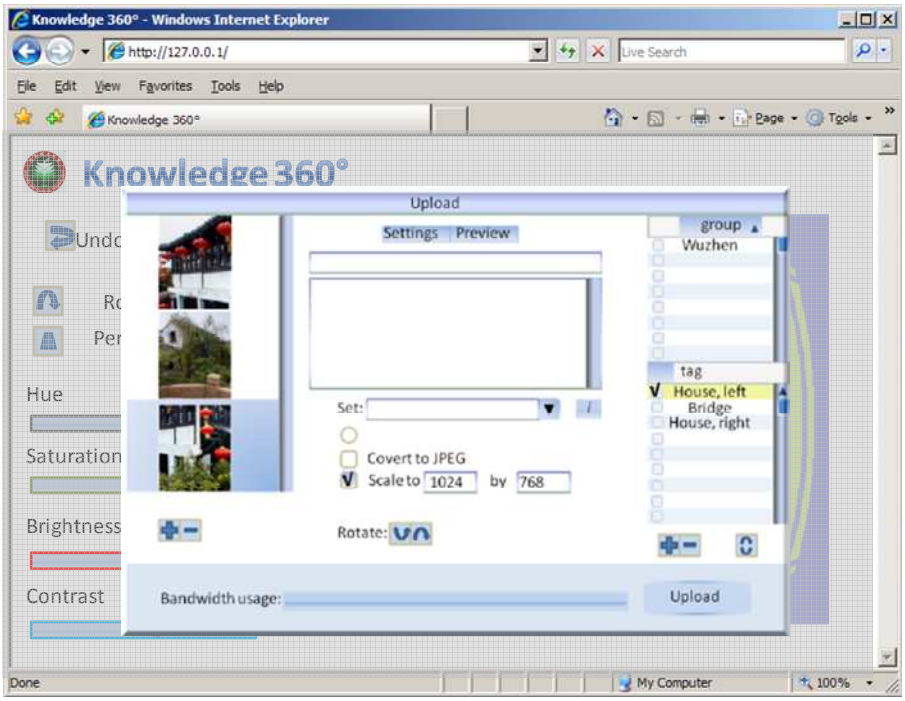
We present here an Internet based interactive panorama system for educational use. It presents the student with the information they want, at their own pace. Imagine a breathing world coming to life, 360 degrees around you. A world long lost in the mist of time. We can present important historical events, with all the actors on screen. You can scroll around in this virtual world unhindered. Want to know more about a particular item around you? Just click on it, and audio accompanied with text will tell you more. If you feel that you have something to add, maybe you have some brilliant comment to add, or maybe you have a whole new world to share with others, you can do so with the help of panorama builders we provide. Your contribution will be uploaded and can be viewed as any other world in our system. The technology behind this is Macromedia

Flash for the greatest reach and presentability possible coupled with the sheer power of Microsoft asp.net servers for the underlying mechanisms.



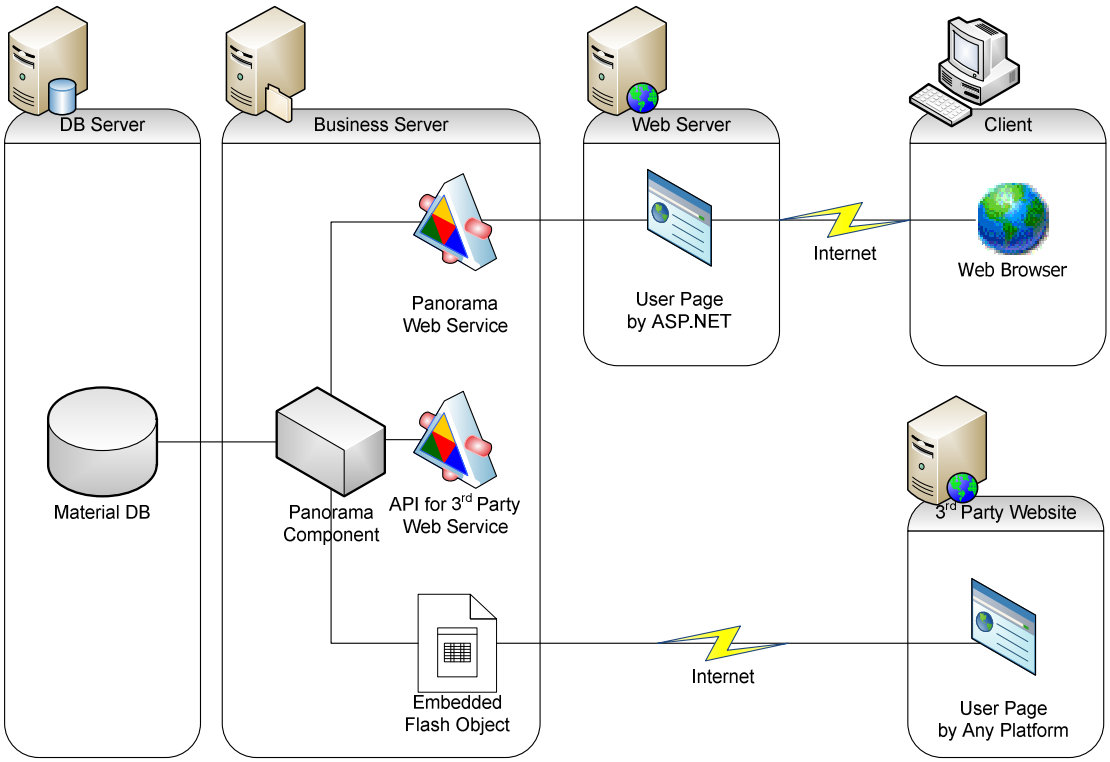
This type of presentation can help make teaching more intuitionistic, you can see with your own eyes the type of clothes they are wearing, the manner of etiquette, the formal ceremonies and so on. These types of knowledge are normally very hard to transmit due to the limits of book based teaching. And with script based interaction, we can make “mini-games”, like riddles and questions, for the viewer to answer. This way, we can root the knowledge, and make the viewing more fun.

In our website, we will be focusing only on historical presentations. But the website is also fit for other themes, we can include themes that include for example travel sites, museums, outer space, dinosaurs and so on.



The Knowledge 360° Panorama System

The main part of the Knowledge 360° Panorama System is developed using asp.net. It has a three-layer B/S architecture. Data, logic and web servers are separated and running on Windows Server. The underlying couplings are made using XML Web Service. This greatly enhances the augmentality and maintainability of our system.



The Data Layer:

The data servers run a SQL Server 2005, storing all the necessary data (The panorama pictures, text, audios, movies…). This sort of independent storage helps the security and synchronism of the data. If the data grows to a bigger scale, the data layer can employ a disk array system with no changes in the logic layer.

The Logic Layer:

The logic layer utilizes the data from the data layer to create the panorama picture, and all the relevant text, audio and video. At heart, the logic layer is a panorama picture creator.

The logic layer exposes its functions through web services. At the same time, the system supports third party web developers through web services API or embedded Flash objects.

The Presentation Layer:

The web presentation layer aims to give users the best viewing experience as possible, making it possible for them to use the system without prior experience. Utilizing the Atlas architecture and Web 2.0 elements, the web site can interact actively with the user. For example, it uses asynchronous transmission to pre-load data that the user might use in the near future, streamlining the viewing process.

The presentation layer is written using the asp.net components. This helps make the style and the

authorization management of the system more streamlined, secure and painless. The management of the network, including the uploading and management of data, is done strictly with Web operations. This is done to help both the administrator and user to create and upload user data.
The system uses Flash to display the panorama pictures, so as to further maximize the visual effects and interactiveness of the system, at the same time decreasing the reliance on special browser environments.

The Panorama Engine

Our panorama engine uses Flash for greatest reach. What sets it apart from normal panorama engines are mainly 3 points:

1. Cinematic elements.

Traditional panorama pictures are just a set of normal pictures put together. To make our panorama picture more attractive, we incorporated cinematic elements into the engine. We can render walking people or burning fire and such.

2. Navigation elements

Special items and navigation buttons are implemented. These items can respond to user activities like mouse-overing and clicking. This greatly helps the accessibility of our system.

3. Hotspot elements:

Clicking hotspot elements in the scene will run script elements. This makes for greater freedom for creators when creating panorama scenes. We can display info on each element, for example, we can display text and speech, like a guide. Or we can create puzzle to help make the site more attractive, or we can link several scenes into a coherent world through doors and corridors.