Everyone knows how important reference for scholarly work is, even if just from assignments at school or the university. Reference, however, is no less important in more art-related areas, such as the game industry, especially as far as its initial design phase is concerned – the one best known as pre-production. This article focuses on the three main problems a game developer encounters in the search for the right references. It also proposes an idea for the creation of a vast image reference library to be subscribed to by the game studios worldwide.
Pre-production has always been the most exciting, the most fun part of game development. This is the time when the team members can let their imaginations roam free, asking one simple question: “What is the best game we could possibly create?” A big part of the pre-production magic is finding the right visual style, and it always starts with gathering the right (image) references. If the production was handled by a high profile studio with a multimillion-dollar budget, then the pre-production fairy tale would become even more magical. Why not send a team of five or six people for one week to Prague, London, or somewhere in Africa? They would then return triumphantly with a precious load of thousands of high-definition, state-of-the-art images of the right buildings, people, objects, and environment. This treasure would become the visual backbone of the prospective instant classic of a game. Even better, the art lead and the senior artists would literally immerse themselves in the spirit of the place to later on inspire the rest of the team. Yet, if pre-productions like this do exist, I have never been part of them. I have only read about them, wondering if it all was not just a PR stunt. In reality, gathering reference material is done mostly sitting at your desk, asking the Almighty Internet to lend you a hand.

**Problem 01: Quality and Resolution**

If you were rummaging through the Internet just for fun, the World Wide Web would look like an almost infinite source of images. If you were trying to do some professional work, though, it would be quite a different kettle of fish. The vast majority of the visual material to be found on the Web has already been butchered by some sort of amateur Photoshop work, not to mention all of the cheap scans one could stumble upon through years and years of desperate search for quick...
image references. Now imagine a really good image that has been properly scanned first and then ‘re-mastered’ (or, indeed, somehow digitally altered by means of some image editing software) by a total enthusiast. But the things such ‘enthusiasts’ would find important for their re-mastering would hardly ever meet the requirements of either a scholar or a game developer, not to mention the aesthetic side of the issue.

To add to the researcher’s desperation, the few images that could actually do the trick are usually terribly small. Why make a big issue of this, if you need them just as a reference and not for, let’s say, a hard copy of any kind? The problem is that when a game developer is looking for a visual reference, they are actually looking for the details in it. So no thumbnail would be distinguishable enough; none would be of any use when they really need to create a fascinating intricacy.
Problem 02: Copyright
It may sound incredible that all the images on the Internet are copyrighted, but, as a matter of fact, they are. Sure, there are search plugins that could help a bit, yet none of the ones I know about is absolutely fail-safe. Why should you worry about copyright, if you are only using the images for reference? The problem is that in a project with, say, 30 artists involved – which is by no means a big project – once an image enters the production folders there will be always a risk that this image might end up on display in the final product. Even when it is clearly and explicitly marked as ‘potentially copyrighted’, there is so much back-and-forth going on in a two-year long production that it is practically impossible to keep all images under control all the time. Fear of missing the deadline can easily make you blind to the danger of copyright infringement. I can tell you how often I have felt like a cartoon character with the deadline hanging over my head like a two-tonne safe, and how I would have given everything for a single piece of asset-saving imagery.

Problem 03: Authenticity
This is actually the most difficult part. You can never rely on any information about certain images found on the Internet, especially when it comes to authenticity. If, for instance, you are working on a real world game – such games tend to attract players with affinity to some particular time and place – and if your game visuals are drastically incorrect, even in some aspects only, it will not go unnoticed. Gamers are no less sensitive to authenticity and visual correctness than the average spectator of a historical movie, and any discrepancy would upset them to a point where they would start posting angry comments about your ‘historically incorrect’ title, to say the least. Besides, this is the worst that could happen to a game deve-
loper - to disappoint the people their games are intended for.

Even more important, games are - or at least should be - a great source of education and training. It would be a shame to destroy such an opportunity by introducing distorted information. When you have the power to influence younger players in an entertaining way, you should do the right thing and not feed an info-hungry kid with false visuals or bore them with basic things. You simply cannot afford the luxury of not checking your sources.

In addition, if the two potential authenticity issues mentioned above are more or less to be considered our moral obligations as game developers, what would happen when certain religious ideas are involved? It could be an utter offense if the visual representations of certain religious objects were not close enough to the real ones. What if you were not able to represent the divine symbolism behind the architecture of a temple? People tend to be - and with very good reason - extra-sensitive when it comes to religion. Do you think that a ‘best reference I had’ type of excuse would make anyone feel better about it?

The sad truth is that the poor quality of the reference material we use while developing games is more often than not a question of lack of choice, rather than time pressure and a limited budget. In most cases, it is simply the best you can do. If you are not able to send a team on a weeklong research trip to a particular location, you would not buy printed albums instead. Anyone ever involved in a digital production knows this well. Nor would you hire an expert consultant instead, because, even if you could afford it, it would be totally unproductive. Besides, it is doubtful that such specialists would be able to provide you with all the visual reference you need in digital form.
Is there any way out? For the time being, I can only dream of a perfect world, where somebody, somewhere, somehow has gathered a vast digital reference library the game developers might use – and they gathered it in a competent way, managing to verify the digital objects’ authenticity, clearing the copyright, and providing impeccable visual quality. Perhaps there are certain academic entities maintaining such digital libraries in their respective fields of knowledge. Perhaps there are only a few, and none of them would have a digital reference library that covers all – or at least the most of – the specific topics we might be interested in as game developers. But there should be some way to organise a cluster of such digital libraries, to make them all easily accessible through a single digital asset management application. If the imperative to creatively reuse digital heritage can make IT specialists develop such an application, it would be a real challenge to make it a subscription-based service for game developers in need of high-quality, authentic visual reference material. If someone ever does that, all you need to tell me is where to sign.
The object in the game
(Source: Imperia Online
http://www.imperiaonline.bg/bg/wp-content/gallery/imperia-online-units/katapult-i.jpg)