

22 May 2007

By: Bogdan Solca, Hardware Editor



## [ATI's R700 to support DirectX 10.1](#)

*Improved tessellation and more graphics power through redesigned multi-core architecture*

As ATI's R650 launch gets closer and closer, more rumors and official information begin to surface. This also applies for the upcoming R700 GPU, which is supposed to revolutionize the graphics card sector. The latest developments point to the fact that the R700 multi-core chip will support the improved DirectX version 10.1 (rumored to be renamed to DirectX 11). The tessellation engine implemented in the R600 GPU and further developed with the R650 model will reach version 2.0 by the time the R700 is released. The tessellation feature isn't supported by any graphics API, but Microsoft promised that this nice addition will be included in the 10.1. Game developers think that the tessellation support could also be easily introduced into the OpenGL API. As you may already know by now, the hardware implemented tessellation support will allow game developers to create extremely detailed terrains and characters with only a few polygons. In order to obtain the incredible amount of detail, the GPU will tessellate a reduced number of polygons, in up to 15 segments per polygon. ATI has already demonstrated how this process works in their Ruby technological demo that comes with the HD 2900XT cards, but it's fair to say that any actual game implementation won't get to be released until late 2008. ATI does not intend to radically transform the R650 GPU, so we won't get to see the multi-core technology sooner than the R700. According to ATI, the next-gen chip will be made out of a number of smaller chips. This number of chips will determine the targeted market sector: a single chip will represent an entry level card, two chips will make up a mainstream one, while four to eight cores on the same die will make for high-end solutions. The multi-core architecture should also feature the CrossFire support, leading to configurations of sixteen GPU cores in the case of two high-end R700 graphics cards. As for the soon-to-be-released R650 model, ATI claims that it has slightly redesigned the core in order to greatly improve the texturing power issues that came with the R600. We should also expect some previews of the R650 GPU soon.