

Dual Role:

Art Direction and CG Supervision

NBA Live '06

The challenge:

The visuals on NBA Live 05 were not competitive with NBA 2K5, and this had traditionally been an area where EA was an acknowledged leader.

I was determined on NBA Live 06 to find ways to create a major visual improvement and show EA could demonstrate leadership in this area again.

I wanted to use the more complex rendering effects that the Xbox was capable of however, the game was already very tight for memory and we didn't want to sacrifice frame rate...

The solution:

In order to free bandwidth (memory and frame rate), the player poly counts were carefully reduced, player shadows were approached in a different way, and texture layouts were scrutinized for optimization opportunities.

Many areas had to be carefully art directed to work in harmony with the additional effects as they were added.

The resultant effort allowed us to use a variety of maps (normal, specular, detail, masking) to greatly enhance the look of the players and court surface.

Behind the scenes, this also required a major re-write of the art pipeline and game shaders which was accomplished while continuously keeping the game builds running



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NBA Live 05: Xbox

Player Textures:

*Skin Changes:

- >Reworked skin textures and UVs to better represent musculature
- >Added specular map to modulate the highlights on surfaces
- >Added a soft normal map so highlights traveled smoothly across surface as polygon count was reduced freeing bandwidth for other player upgrades

*Uniform Changes:

- >Added Normal Map creating more dramatic wrinkles that responded to lighting
- >Added Specular Maps to modulate highlights, differentiating materials
- >Added Detail Map to create perforation pattern
- >Added Perforation mask so perms only draw on front panels



NBA Live 06: Xbox

Player Arms and Tattoos:

- *Reworked arm geometry to look more muscular
- *Reduced poly count on players to free up bandwidth for other effects
- *Added Alpha transparency so tattoo blends softly into arm
- *Adjusted UV layout to improve tattoo distortion
- *Reworked art to preserve finer detail; used sharpening filter when downsampling
- *Repositioned tattoos to better match reference
- *Adjusted colour/luminance of ink colors to match reference



NBA Live 06: Xbox



NBA Live 05: Xbox



NBA Live 06: Xbox



NBA Live 05: Xbox

Player Lighting:

- *Replaced artificial rim light; did not respond in relation to apparent light sources
- *Added specular maps to modulate the highlights on surfaces for more natural look
- *Upgraded lighting model to offset the lights from the camera, to better model the players
- *Replaced jagged, geometric shadows with a soft contact shadow for a more natural look
- *Shadow changes reduced memory and fill rate to allow other effects
- *Softened the reflections with a dirt map and reduced their intensity so as not to distract



NBA Live 05: Xbox



NBA Live 06: Xbox



Stadium Lighting:

- *Replaced 2D crowd with 3D geometry for front several rows
- *Added a 'dirt map' to soften reflections, and reduced their intensity
- *Created a more dramatic look with a 'pool of light' around the court:
 - >Added more lighting contrast on court; brighter 'pools'; darker shadows
 - >Made crowd areas away from court fall into shadow more quickly
 - >Made 2D crowd darker; less visually distracting
 - >Reduced brightness of advertising banners on concourse level

