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>
> —Mohamed Gambouz
> Art Director
> Ubisoft Entertainment

When in Rome.

Ubisoft uses Autodesk games technology to create *Assassin's Creed: Brotherhood*.

Assassin's Creed: Brotherhood. Image courtesy of Ubisoft.

Summary

In 2007, Ubisoft Montreal created a third-person action-adventure game named *Assassin's Creed*. The universal success of the top-selling, award-winning game set in both the distant past and the not-so-distant future led to the creation of *Assassin's Creed II*, which saw present-day protagonist Desmond Miles reliving the genetic memories of ancient assassin Ezio Auditore da Firenze, all of which take place in Renaissance-era Florence, Italy. The second installment also proved a huge success.

Now, the Ubisoft team has raised the bar again for *Assassin's Creed: Brotherhood*, an ambitious new entry in the evolving story of the assassin that is the first to include a multiplayer mode.

Assassin's Creed: Brotherhood picks up where the second installment concluded, with players being reintroduced to both Desmond and Ezio, who has now become a Master Assassin and moved to the much larger city of Rome. Ezio's mission has also grown in scope and responsibility, as he attempts to build a brotherhood of assassins to vanquish the evil Templar Order and a new arch-nemesis, Cesare Borgia.

Ubisoft artists and engineers used the powerful combination of Autodesk® 3ds Max® and Autodesk® MotionBuilder® software, together with Autodesk® HumanIK® animation middleware in the company's proprietary game engine, to create the biggest *Assassin's Creed* title so far.

The Challenge

According to Ubisoft technical art director Danny Oros, the primary challenge from the start of *Assassin's Creed: Brotherhood* was creating the ancient city of Rome. Nearly double the size of Florence, the scene of *Assassin's Creed II*, Rome significantly increased the scope and complexity of *Assassin's Creed: Brotherhood*.

"Creating such a vast city was definitely a big challenge," says Oros. "Players have a lot more room to explore, and we had to make sure everything is as realistic as it is interesting. As Ezio and his fellow assassins help to rebuild Rome, players actually have the opportunity to change the city, to see it evolve through several distinct atmospheres. Players are essentially creating a new Roman renaissance through Ezio's actions and behavior."

Assassin's Creed: Brotherhood. Image courtesy of Ubisoft.

Autodesk®

Following hard upon the release of *Assassin's Creed II*, the Ubisoft team benefited from their continued use of Autodesk 3ds Max and Autodesk MotionBuilder software, and particularly Autodesk HumanIK middleware, which helped to create realistic character movement through the immense city, whether characters are walking on uneven terrain, scaling walls, jumping across rooftops, or fighting enemies.

"HumanIK middleware has been a part of our game engine for all of the *Assassin's Creed* titles," says Oros. "With it in our corner, we were confident that we'd be able to address all of our inverse kinematics challenges, more quickly and with no compromises in performance or results. That is a good feeling to have going into such a challenging project."

The Results

As Ezio recruits other assassins to his cause, the brotherhood of the title begins to grow more powerful, and their actions become more benevolent. Helping to free the Roman people from the Templar and Borgia's rule, the brotherhood goes about restoring the oppressed city to grandeur. As they do, the five districts of Rome clearly evolve through three distinct and compelling atmospheres.

"We created three different looks for each of the districts, pretty much all from scratch," explains Mohamed Gambouz, art director at Ubisoft. "3ds Max and MotionBuilder give us an efficient workflow that we really trust to help us get the job done. With the help of the Autodesk tools, we were able to create a huge amount of complex original content well within our production timeline."

Ezio's evolution into a Master Assassin is also revealed through a slew of ambitious and aggressive fight animations and character moves that are new in *Assassin's Creed: Brotherhood*. "Combo kills," for example, enable players to eliminate multiple enemies in a single deadly move. The Ubisoft team shot the new fight concepts using motion capture technology before bringing the data into MotionBuilder. The realistic fighting was then used to create the final animations in 3ds Max.

To learn more about Autodesk 3ds Max and Autodesk MotionBuilder software, visit **www.autodesk.com/3dsmax** and **www.autodesk.com/motionbuilder**.

For more information about Autodesk HumanIK animation middleware, visit **www.autodesk.com/humanik**.

Assassin's Creed: Brotherhood. **Image courtesy of Ubisoft.**

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Assassin's Creed: Brotherhood. **Image courtesy of Ubisoft.**

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