Airbus-SV - A^3 - Altiscope - SESAR

Building Blueprints for the Sky

A Transformative Future for the Skies

There is no doubt that our world is on the cusp of exciting technological advances in aviation. The once speculative arena of science fiction - personal transportation, flying cars, unmanned aerial vehicles - is underway as the new reality. As the skies get busier systems must be devised to safely accommodate this rise in traffic.

European aviation leaders recently gathered at a conference hosted by **SESAR**, the joint undertaking for a Single European Sky ATM Research, to show their support for a digital transformation. Now their task begins to modernize Europe's aviation infrastructure and air traffic management system (ATM) to enable more connected aviation and with that seamless travel and transportation for all.

Little Fluffy Clouds was chosen to create a film for that conference illustrating the predicted rise in air travel and the synchronized innovation that such an evolutionary advance in the future of flight will bring. Working in partnership with, **Airbus-SV, A^3, Altiscope** and **SESA**R, a glimpse of a redefined future is revealed.

The 3-minute animation begins on a slowly turning shot of the blue planet showing flight traffic patterns from the mid-20th century, increasing in scale through present day and culminating in a predictive flow to 2030. A simulated aerial view over Paris spotlights how air traffic patterns might look in 2030 when autonomous aircraft join the skies. As we move through the film from industrial, agricultural, airport and city scenarios, this carefully planned for future landscape is illustrated in juxtaposing palettes of muted cast and exceptionally vibrant color both with a distinct harmonious patination that gives the video a pleasing artistic continuity.

Learn more about this monumental shift in aviation and the way we view our skies here: http://www.sesaju.eu and more about the mission of Altiscope and Airbus3 here: http://www.airbus-sv.com

Creative and Technical Challenges

Many times Government sponsored symposia are dry and often prosaic affairs but the SESAR joint undertaking conference that kicked off the campaign for the next edition of European Air Traffic Management (ATM) Master Plan, was anything but. A multi-nation group of policy makers, government heads of transport, ministers, air traffic controllers, scientists and luminaries from the aviation industry came together with one aim in mind – to plan for the future together.

This posed our first set of conceptual challenges:
° How to visually engage such a, both politically and professionally, diverse and knowledgeable group in a concise and supportive way
° How to excite their enthusiasm, trust and support
° How to address anxiety and alleviate real fears about change and the future

The question we asked ourselves is how we could create a clean clear look that can explain the concept as clearly as 2D motion graphics can but at the same time visualize a world that has a certain amount of realism.

Our client liked the idea of a similar stylization as seen in some of our other work but were at the same time very specific about how an airport should look and how it needed to operate. They also asked us to populate these airports with specific planes, trucks and cargo trollies. To the untrained eye these might all look the same but we needed to stay close to the truth with this discerning audience. A3-SESAR also called out specific cities they wanted to emulate.

It was clear that we needed to come up with a look that could be clean, clear and beautiful yet at the same time realistic.

We decided to create the entire animation in 3D but render out mattes for each element including normal, shadow and depth passes so we could control lighting, coloring and some of the texturing in After Effects. We simplified each separate object as much as possible. Cars, buildings and planes were created in very basic shapes. Any detail that we needed was drawn in Illustrator and mapped onto these objects including shadow, highlights and reflection elements.

Each object ended up being distilled to its essence. The complexity of the image grew as all these elements came together in the scenes.

Continuing our balancing act between realism and stylization we choose to create realistic atmosphere. Each scene carries its own color to create a visually stylized separation. To accentuate that we used depth maps to overlay a color haze to compliment the scene. This created a realistic feel in very stylized world.

In this animation we needed to tell the story of the changes in the sky and the effects that has on the land. This created another challenge. The choreography of the camera had to show both worlds in a most elegant way.

The first two opening scenes were the most technical. In these we needed to show growth in air traffic and cities between 1950 on and all the way up to 2030 above Europe and particularly Paris. It had to be convincingly real but we also needed it to somehow work well with all the other scenes. Here a balance was needed to find the right equilibrium between reality and abstraction.

Creating that many flight paths was another head scratcher. We ended up creating an animated texture map for all the flight trails in After Effects and mapped this onto a 3D sphere. However, we still needed to draw all the flight paths. For that we wrote a script. Then all we needed to do was to draw one flight path using Trapcode Particular originating from one airport to another and the script would continue to animate the trails with adjustable variation in their flight paths. The point of departure and arrival always remained close but what happened in-between had a nice controllable randomness.

SOFTWARE:
Maya 2017
V-Ray
Smedge
Adobe Illustrator
Adobe Photoshop
Adobe After Effects
Red Giant Trapcode Particular