

# disguise supports SACO in reaching new heights with Burj Khalifa

SACO Technologies was tasked with designing a permanently mounted system capable of delivering high-resolution video on the surface of the Burj Khalifa..

In this case study you will find out how the disguise production toolkit integrated with SACO's own systems to power the LED screen running the length of the world's tallest building.



# At a glance

## The project goal

Burj Khalifa, developed and owned by Emaar Properties Dubai, teamed with SACO on an initiative to light up the skyscraper's east façade and provide high-resolution video capabilities for what became the 'Light Up 2018' New Year's celebration.

For the 'Emaar NYE 2019' show, the scope was even more ambitious. The production extended through to March 2019 and set two Guinness World Records: the largest LED-illuminated façade, and the tallest LED-illuminated façade.

The project required replacing the existing temporary system with a permanently mounted system consisting of the latest in LED technology, video processing and disguise pro range servers, all designed and implemented by SACO.

German-based disguise studio and rental partner bright! studios were responsible for designing the NYE show, and the resulting 3-month extension, handling the animation work and the shows creative direction.



# The challenge

In order to address the parameters, constraints and seven-month deliverable timeframe of the project, SACO had to rethink how to approach the challenge.

In order to remain efficient and respect the short timeframe, SACO's Architectural division sourced and created state-of-the-art parametric tools, which they used to calculate the layout of every component on the façade, including cable path and links, and control room layouts.

Another challenge was how to attach the SACO V-Sticks and carrier to the fin detail of the building without covering the actual architectural fin. One of Burj Khalifa's many features is the incredible shine that comes from the polished stainless steel architectural fins that run the length of the building. To add to the challenge, drilling into the fin was not permitted. To resolve this condition, SACO designed a special stainless steel bracket that hugs the fin and clip on its back edge. In order not to affect the "shine" of the architectural fin, the bracket was polished to match the finish of the fin. The result is a seamless linear feature that disappears until the lights are turned on.



# The solution

The SACO solution, which utilised its innovative V-Stick technology has 20 times more resolution than the previous system and extends virtually the entire height of the structure. It comprises more than 17 miles of V-Stick LED video/light fixtures and boasts 1,139,144 RGB pixels, mapped and powered by disguise.

SACO chose a disguise 2x4pro to drive the complex media display. “We’ve been working with disguise since the very beginning and have developed an interesting workflow between our two companies,” says Jonathan Labbee, Executive Vice-President & COO with SACO. “SACO has also developed a processor mapping tool, which directly uploads coordinates to the disguise unit. To help bring the integration to the next level, SACO also collaborated with [dandelion + burdock](#) who they have worked with for several years. dandelion + burdock, a disguise studio partner, specialises in custom disguise solutions and developed a workflow and devised content for the project.



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“The functions and features of disguise that were particularly helpful for this project were its 3D mapping tool and live input capability, as well as the ability to manage very large video files.”

**Jonathan Labbee, Executive Vice-President and CMO of SACO**



# Results

Six custom multimedia shows were created by SACO Media Collective as part of the Burj Khalifa daily content. It was important that the visual content related to the building and its architecture, impressing visitors by presenting visual effects to trick the eye and enable the architecture to take on a 'second skin.' Whether with colours, lighting effects or 3D deformation, the content was never flat to the surface and used the building's curves and depth as its canvas.

"For the actual content production pipeline, two different templates were created in Adobe After Effects to allow content to fit perfectly our system specifications, SACO's technology and the building architecture," explains Marie-Christine Dufort, Creative Director with SACO Media Collective. "Even though the building is really tall and the accurate pixel count was enormous, the templates were easy to use and helped create any type of content very efficiently. A simple 3D model was also used for 3D and architectural effects and animation."

The templates were not only created for the team's use but also to produce the technical specifications and guidelines for any content creation for Burj Khalifa's new screen. "Emaar and the Burj Khalifa team wanted the possibility of presenting their own content in the future as well as giving an opportunity to young creators to present work of their own through an open call."



# Success

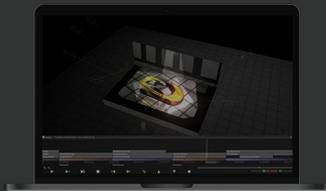
Integration is key; technology is a tool that should exist to support a vision and it should be flexible enough to remain invisible until the story requires it. We strive to create technology based on the requirements of our client. It was a pleasure to work with Emaar. Open-minded and extremely focused, they knew exactly what they wanted. We collaborated closely to make their vision a reality,” says Jonathan Labbee, Executive Vice-President and CMO at SACO.

“SACO is a 360-degree company. It’s important for us that our clients know that we are there to support them before, during and after. This is one of the important aspects that the Emaar and SACO teams discussed, and we are very proud of what we have achieved together,” says Yanick Fournier.



# disguise equipment used

## Designer software



Install and use Designer on your laptop as a powerful toolkit for winning pitches, developing storyboards, creating camera fly-throughs, validating content, testing technical setups, and designing entire shows.

[Find out more.](#)

## 2x4pro



Built with the same DNA as the 4x4pro, the 2x4pro packs a mighty punch. Scale up to two 4K outputs, or 8 HD outputs, the 2x4pro hits the technical requirements for the everyday show or project.

[Find out more.](#)



# In partnership with:

Produced by: [SACO Technologies](#)

Studio & facilities: [bright! studios](#)

AV equipment supplier: disguise

Creative direction: [bright! studios](#)

Visuals: [SACO Media Collective](#)

Workflow, content, consultancy: [dandelion + burdock](#)



SACO



# Get in touch!

Curious to know more about us? Want to master our production toolkit? Need support on your project? Our team will be happy to speak to you, whatever your query:

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