he faint, incessant beeps of Sputnik marked the beginning of the Space-Age, an era that simultaneously advanced Cold War fears of nuclear annihilation, led to a telecommunications revolution and witnessed humanity’s initial steps upon another celestial body. It is an era that also set in motion new themes in American popular culture. Children were lost in a world of toys and comics that emulated their astronaut heroes, kitchens sported Frigidaire’s “Space-Age” appliances, automobiles had both space inspired designs and nameplates. The Space-Age would also impact the era’s architecture, with building facades that appeared as if they could soar into the sky or serve as an outpost upon the lunar surface.

Space-Age architecture is a distinctive sub-category of mid-century modern architecture, favoring similar building materials—large expanses of glass, visible steel, and concrete. It often incorporated distinct stylistic elements that harkened to the new Space-Age—flying saucers, rockets, arches, and wings. While especially prominent in Southern California and “Rat Pack” era Las Vegas, Space-Age architecture appeared in communities across the country. Conveying an unflappable sense of enthusiasm for the future, the style took form in service stations, hotels, banks, single family homes, and even large sporting venues.

The Institute for Simulation & Training (IST) at the University of Central Florida (UCF) has embarked on...
project to laser scan significant “Space-Age” structures and equipment that are directly related to or inspired by missile/space activities of the 1950s and 1960s. We acquired the FARO Focus 120 in late 2013 to serve as our primary scanner unit. Our first major effort centered on laser scanning the (Mercury) Mission Control Center (MCC) consoles from Cape Canaveral, Florida.

Prior to Gemini IV, Cape Canaveral served as mission control for all unmanned and manned flights of Projects Mercury and Gemini. Due to significant structure deterioration and asbestos contamination, the original console units were removed for display at the Kennedy Space Center Visitor Complex (KSCVC) with the building housing the units demolished in 2010. The display at the KSCVC provides visitors the opportunity to view the original console equipment from the perspective of a raised viewing area in the original MCC building. As the KSCVC is open seven days a week, our team was provided access during the evening hours after the Visitor Complex had closed. We utilized the FARO S120 scanner and conducted a series of 6mm @10m scans, 19 in all. Our goal was to capture not only the overall layout of the console units, but the significant fine detail of buttons, switches and dials on the units to enable us to ultimately create MAYA models of the consoles for future interactive educational experiences.

Our next Space-Age scanning project was the New York State Pavilion, the largest architectural artifact from the 1964/65 New York World’s Fair. Designed by noted 20th Century American architect Philip Johnson, the Pavilion was comprised of three distinct components: the Tent of Tomorrow, Theaterama and Astro-View Towers. It is a building whose profile suggests it could serve as the New York home to The Jetsons. Unfortunately, time and weather have significantly deteriorated this former calling card to the future to the point that it appeared on the 2008 Watch List of 100 Most Endangered Sites by the World Monuments Fund.

To undertake a project of this size UCF partnered with CyArk, a global leader in the digital preservation of cultural heritage sites. The New York City Department of Parks & Recreation—Flushing Meadows Corona Park provided our team with access to areas of the Pavilion closed to the public. Preliminary site review revealed a maximum height of 226 feet if we intended to capture the Astro-View Tower component of the Pavilion. To ensure our ability to capture this height, FARO provided the use of its long-range Focus 3D X330 laser scanner unit. Planning for the capture was undertaken jointly with and conformed to all standards set by CyArk.

Five days were allocated in June 2014 for on-site scanning with consideration given to additional artifacts from the Fair should time permit. On day one, the UCF team conducted a series of 6mm @10m scans encircling the entire Pavilion.
perimeter, 32 scans in all. On the second day we split our team into two, with one team using the FARO X330 capturing the higher elements of the Pavilion with a 3mm @ 10m setting. The second team utilized the FARO S120 to secure a series of features that would have been obscured in the previous day’s scans, usually because these areas were behind pillars. Again, these were 6mm @ 10m, and the scan totals were 15 and 19 respectively. On the third day, the Parks Department provided interior access to the Tent of Tomorrow and 23 6mm @ 10m scans with the S120 and 10 3mm @ 10m scans with the X330 were collected. CyArk utilized their Leica C10 unit to capture an additional 6 New York State Pavilion scans.

With the weather having cooperated during these initial three days of New York State Pavilion capture, it was determined we could begin scanning the Unisphere. While recognized today as the symbol of the Borough of Queens, the Unisphere served as the centerpiece of the 1964/65 New York World’s Fair. Floating atop its pedestal, the stainless steel Unisphere soars an incredible 12 stories above the park grounds and represents the very essence of the Space-Age with orbital paths encircling the massive globe. The Unisphere offered a unique challenge with the continents sitting atop open air lines of latitude and longitude. Eight (8) perimeter scans and 12 scans beneath the Unisphere within its surrounding fountain pool were conducted to ensure a comprehensive capture. The data captured can provide an excellent baseline for the Parks Department to observe the impact of the urban environment upon this impressive Space-Age artifact.

Perhaps no community so readily evokes visions of the Space-Age as Cocoa Beach, Florida. During the 1950s and 1960s many of the buildings that dotted its expansive shoreline provided an architectural link to the space activities at nearby Cape Canaveral. Unfortunately, with the passage of time they have been susceptible to demolition or extensive remodeling. Its wealth of Space-Age motels—Satellite, Starlite, Astrocraft, and others—have been torn down to make way for new high-rise towers or have been stripped of their Space-Age facades. The Astrodine restaurant, featuring Satellite Chicken beneath its geodesic dome, has long since been torn down. The once breathtaking “Glass Bank” is currently being demolished.

The vision of architect Reginald Knight, the Cocoa Beach “Glass Bank” opened in April 1962 as the Cocoa Beach Branch of the First Federal Savings and Loan of Cocoa and quickly became a community landmark. The building appeared as if an elegant glass cover had been delicately placed atop its four floors. Our scanning team was provided access to the structure just prior to its demolition. On the first day, 26 6mm @ 10m scans provided full coverage of the building’s current configuration. A subsequent day of scanning consisted of 7 rooftop scans to capture the penthouse apartment which was added to the structure in the early 1980’s. While time, weather, and politics reduced this Space-Age vision of the future to that of an urban ruin and led to impending demolition, our scan will serve as the foundation to create a precise virtual representation of the Glass Bank as it appeared in 1964 so that future generations can fully explore this once magnificent structure.

Our next scanning project is the Apollo/Saturn V launch vehicle at the Kennedy Space Center Visitor Complex. We elected to scan this massive 363 foot vehicle as it represents the culmination of the Space-Age, where humanity first
set foot onto another celestial body. As Apollo 17 left the lunar surface in 1972, society viewed Space-Age inspired architecture as one that pointed to yesterday rather than to the future. Many of the period’s residential and commercial manifestations were demolished or severely altered as the 20th Century progressed. It became a style for those who had lived through the Space-Age took for granted and failed to recognize the structures’ uniqueness and cultural value. In part that was the fate of New York’s Pennsylvania Station. Today, we look to it as a lost railroad cathedral, but in the 1960s Penn Station was “just a railroad station” and it was demolished.

The UCF ChronoPoints team would like to thank CyArk, FARO, Langan Engineering, New York City Department of Parks & Recreation, the City of Cocoa Beach and Kennedy Space Center Visitor Complex for their support of our scanning efforts. We would like to note the New York State Pavilion digital preservation endeavor was designated a CyArk 500 Project as a site of distinctive historical and cultural significance.

References

Dr. Lori C. Walters is a Research Assistant Professor at the University of Central Florida’s Institute for Simulation & Training. She is the director of the institute’s ChronoPoints initiative.