This demonstrates how artwork can come to life with augmented animated elements of motion, lighting and sound.

The New Reality: Not Virtual...but Augmented

By Tim Wingert

Prior to the 21st century, much of the hype about Virtual Reality (VR) was based upon the excitement of experiencing a newly imagined and artificially created world in which someone could be placed to act and experience as they wished. Grand scenarios of virtual reality were forecasted as scientists and culture experts predicted VR in ways that incited visions of the incredible worlds created in the famous "Holodecks" from the fictitious Star Trek universe.

What these visionaries failed to forecast was the emergence (and almost instantaneous explosion) of smart phones, tablets and other devices tunneling their way into every smallest portion of our daily lives, becoming our source of news and entertainment, becoming our replacement for our wallets and phones, and creating unconscious habits that affect every facet of our lives from banking to relationships, and becoming our main mode of personal and professional communication.

The ubiquitous nature of these devices has changed our feelings and expectations about past technological promises as well, including virtual reality. No longer do we feel the desire for an artificial transportation that lifts ourselves out of our current environment into a computer-designed and synthetically rendered one. Today's modern individual, both young and old alike, now expects their smart phone to be able to provide the vast majority of experiences, however advanced.

Enter Augmented Reality (AR)... a subtle, yet significant change from the notion of a totally re-created environment to a method of experiencing the here-and-now present environment enhanced by computer generated content. This content - images, animation, text and sound - all can be built into the physical pre-existing world as we see it and all made accessible via those ever-present, multi-tasking devices forever living in our pockets.

How AR Works . . .

The necessary components of Augmented Reality are straightforward. You need a device (with a camera) running an AR functionality application (app). The app then uses the device's camera as its "eye" to constantly be on the lookout for real-world target objects. As these various "triggers" come into view, the augmented content is automatically activated, overlaying new content and information viewable in real time by whomever is holding the device.

What's more, the overlying content is digitally attached to the trigger, so that regardless of your distance or viewing angle, the content always moves with you. The result is a

truly customized and enhanced view of the physical world, with a new experience coming to life privately before your eyes via your smart phone.

Targets can be any kind of two-dimensional image, be it print or digital. Some AR providers also can utilize GPS data or even facial recognition, triggering augmented content to a specific place, structure or person.

The augmented content can be any type of picture, video or audio, but the real "cool factor" here is the relationship between the trigger and the content. The process of witnessing the content come alive out of thin air right before a user's eyes based on the presence of a real-world trigger is what creates the real AR experience.

Augmented Reality can be designed as a stand alone application, custom branded for a client, or embedded as specialized AR functionality within any existing mobile application. There also are methods of utilizing the publicly available channels of several existing AR services.

AR in Action . . .

Some creative uses of AR have been seen recently at historical landmarks, where visitors can view a virtual motion diorama through their phones as they look at various buildings or settings, making the past come alive as they look at the present world.

Instructional video tutorials or help screens can be overlaid directly over the specific object or area in question, mak-

ing engine maintenance, furniture assembly, or appliance repair infinitely simpler.

In-store branding can be taken to the next level but showing customers what is inside a box, how a building set looks as completed, or running a product review video.

Golf courses can provide information or video fly-through at each hole, via a graphic trigger at the tee.

The novelty and uniqueness of the AR experience is such that it lends itself greatly to advertising and sales campaigns. If the goal is to increase the time a pair of eyes spends on any given piece of content, why not make it that most exciting and talked about method of content delivery there is to date?

This shows how an advertiser can bring existing video content into standard print advertising. The printed "trigger" will come to life and transform into the clients promotional video materials.

Event Applications . . .

For keynote speeches, presenters can turn certain slides into triggers that will allow each member of the audience the opportunity to view an animation or motion graphic right in their hands.

Exhibit booths can boost attraction and interaction with triggers being built right into the booth design. This could vastly streamline the set up and lessen shipping costs, as you no longer need to ship and setup DVD players, laptops and monitors since the playback of content now occurs directly on the attendees' mobile devices.

Printed event teaser invites could be sent out to attendees with a trigger launching a short preview video to build excitement and anticipation for the event.

People waiting in line at registration could use their phones to watch exclusive video content or to see daily customized agenda information from triggers built into table cards or other signage.

Networking Fun: Name badges can be set up as triggers, launching anything from a personalized video greeting or a professional bio. To find a proper networking match, you could scan a series of attendee pictures that would alert you to the appropriate find.

Navigation also can be worked into the functionality, as well. No longer is there the need to create costly multiple temporary signage. Instead, utilize existing architecture to create pop-up arrows and directional information on your attendees' smart phones.

AR by IMS Technology Services

Seeing the rise in interest in Augmented Reality, IMS has developed its own AR app, as well as an official product offering to allow their clients to utilize it for events, permanent installations and corporate communications as a whole.

To experience AR for yourself, install the "IMS AR Live" app, available for free from the Apple or Google Play stores. Once the app is installed and running, point the camera at any of the three images tagged as "AR Activated" in this article, and watch as Augmented Reality comes to life!

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This is an example of how an AR app could be used as a training tool for corporate communications. IMS is currently utilizing AR to provide video and audio "walk-throughs" of AV control systems for new users.