

Augmented Reality Character System for Mobile Systems

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Ver.1.2

Augmented Reality Character System

What is Augmented Reality?

Augmented reality (AR) is a live, direct or indirect, view of a physical, real-world environment whose elements are augmented by computer-generated sensory input such as sound, video, graphics or GPS data. It is related to a more general concept called mediated reality, in which a view of reality is modified (possibly even diminished rather than augmented) by a computer. As a result, the technology functions by enhancing one's current perception of reality. By contrast, virtual reality replaces the real world with a simulated one. Augmentation is conventionally in real-time and in semantic context with environmental elements, such as sports scores on TV during a match. With the help of advanced AR technology (e.g. adding computer vision and object recognition) the information about the surrounding real world of the user becomes interactive and digitally manipulable. Artificial information about the environment and its objects can be overlaid on the real world.

Companies like Google, Qualcomm, Dekko, Yelp and many more are seeing the possibilities of this type on mobile interfacing and getting into the space.

1.1 Overview:

A system that allows mobile devices to deliver an original character experience to the user based off of variables.

This will be a strong branding opportunity for companies to deliver rich content driven media and messages in a highly creative way.

2.0 Elements:

2.1 Branded Item

This could be a sticker, a computer screen, and iPad, or a print out of the branded piece. For our purposes let's consider a sticker with the stylized happy face.

2.3 The App.

The app. will interpret the image on the branded item and allow the user to view the branded character in a rich 3D realized immersive environment.

2.4 Brand

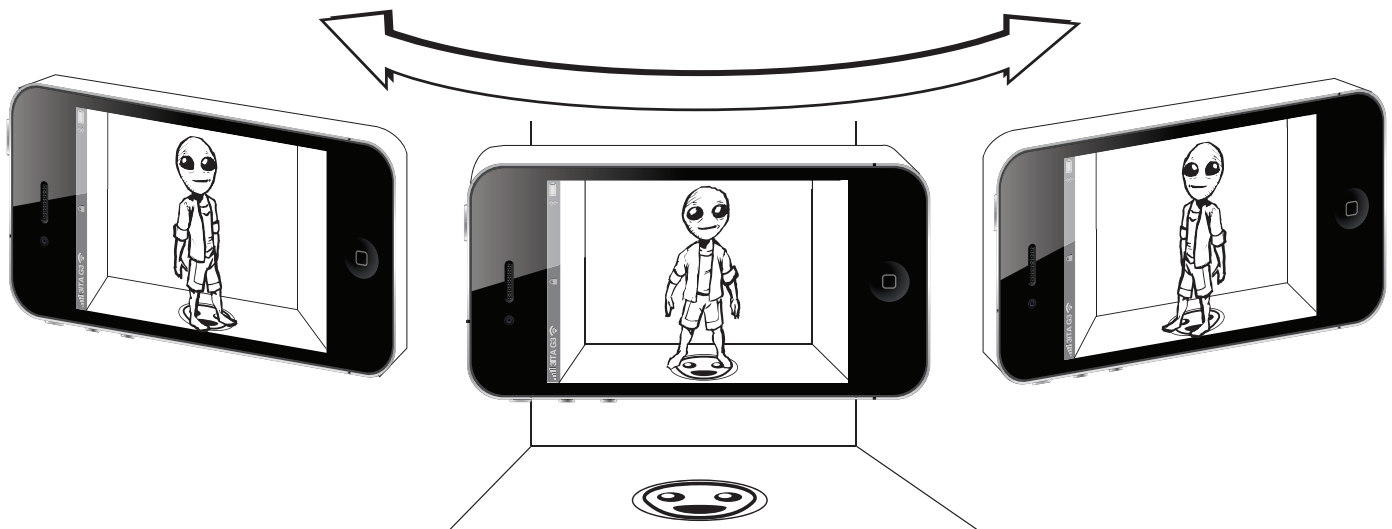
The character based brand that can convey emotions or messages through a 3D generated Character.

3.0 Usability:

When the user comes across one of the branded items they access the app. and use the camera to view the item. When they do, the application presents a 3D character that interacts with the user based on several aspects.

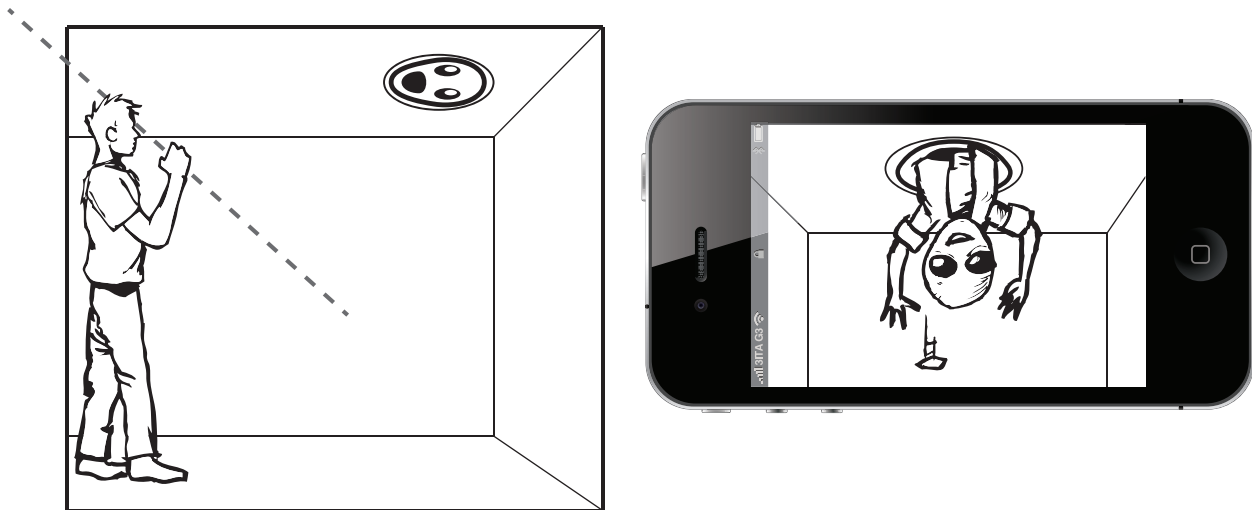
- Time
- GPS
- Available Stock
- Social Media
- Date
- Weather
- Contacts
- Voicemail

Through the view screen on their mobile device, the user sees the character pop up out of the branded item and through a limited amount of animations, the branded character will act out several scenarios using the accelerometer (the x,y, and z axis of the phone) and the way that the device is being held.

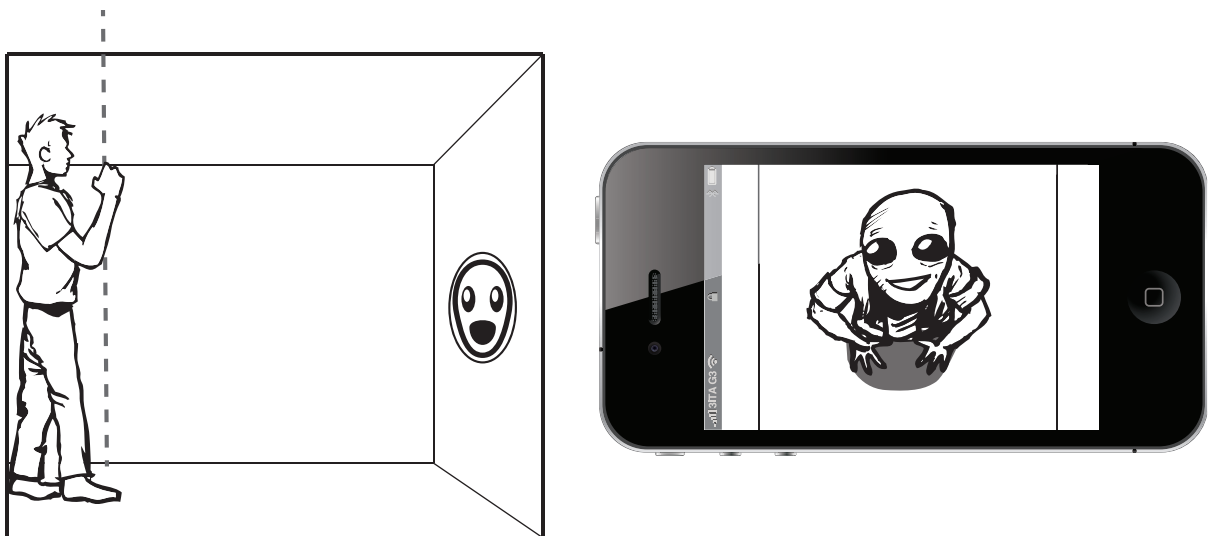


Sample A) When the user goes around the branded item on the y-axis, the character will be visible on the devices screen and appear to have dimension and parallax as if it was there in person.

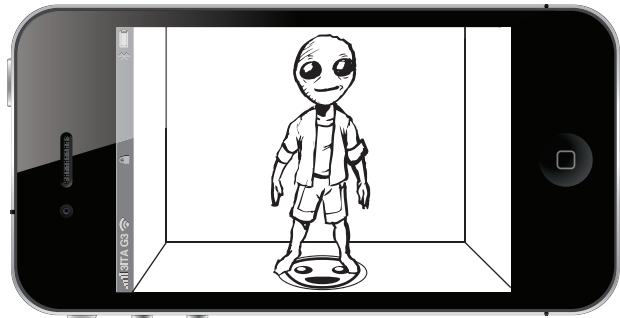
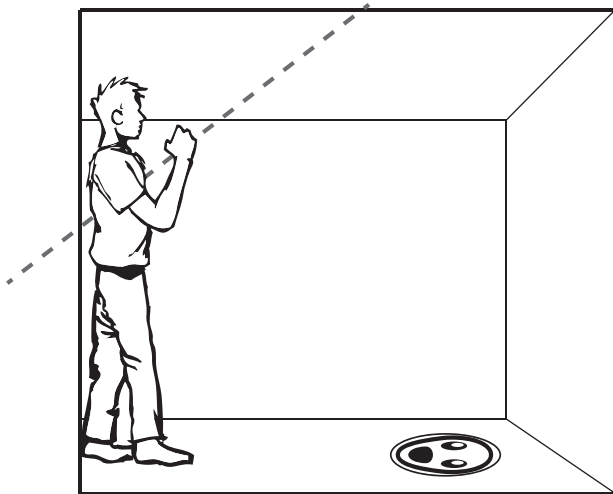
Sample B) When the user is holding their device and the accelerometer reads that the device is being held up at an angle on the X-axis and pointed at the branded item (on the ceiling for example), the application will show the character interact as if they are hanging down or popping out of a hatch in the ceiling.



Sample C) When the user is holding their device and the accelerometer reads that the device is being held straight on the X-axis and pointed at the branded item (on a wall for example), the application will show the character interact as if they are in front of the viewer. For example the branded item “opens” up and the character pops out.



Sample D) When the user is holding their device and the accelerometer reads that the device is being held downward on the X-axis and pointed at the branded item (on the ground for example), the application will show the character interact as if they are in front of the viewer on the ground. For example the branded item is standing there in front of them.



4.0 Possible Usage Scenarios:

4.1 Time

- In the late P.M. the character could be wearing pajamas or could be wearing sunglasses mid day. The character could be wiping it's eyes if it's really late in the evening or running in place if it's in the morning.

4.2 GPS

- The characters skin could reflect the location of the GPS with either a flag or a costume.



- The character could start running to a location that was searched for in the app. (functionality).
- The character could give out information (yelp, web based) in interactive word balloons based on the locality. The character can also be used to get deals in locations from four square.
- The character could be used in a contest (scavenger hunt) to help the user find hidden items or clues.
- The character could direct the user to a special deal online (or as a search) via a word balloon, where the user can purchase an item at a local store and have it waiting for them to pick it up.



4.3 Available Stock:

- The character could be tied in with a stock account to see how happy (stocks up) or sad (stocks down) the character is, like a virtual stocks trader. The character can also give information in a stock ticker or in word balloons for an information blast, of give advice.

4.4 Social Media:

- The user could be tied into a social media account that allows the user to keep up on their accounts alerts. For example: Facebook has a mascot that is shown on a sticker. The user comes across a sticker, accesses their app. and the character pops up. The character thinks for a minute, and raises a finger with a word balloon pulling information for the facebook api alerts the user to things such as alerts, new messages or friends updates. Friend updates could also be GPS driven, so local friends could be called out.
- The character can also show tweets based on locations (movie theater, sports events, restaurants) in that local area. The character can point and beckon the user to see the information related to the tweets.

4.5 Date:

- The character can have a special message for the user based on the date. If it's Christmas the character can say "Merry Christmas".
- The users calendar can be accessed to allow the character to give reminders on the date in question. "It's Shannon's Birthday today! Send her a message? Buy her a gift? Get her flowers?" each of these could redirect the user to a service (Messaging to her, amazon for a gift, 1800flowers for flowers).

4.6 Weather:

- The character could be wearing a coat or sunglasses based off of the local weather.



4.7 Contacts:

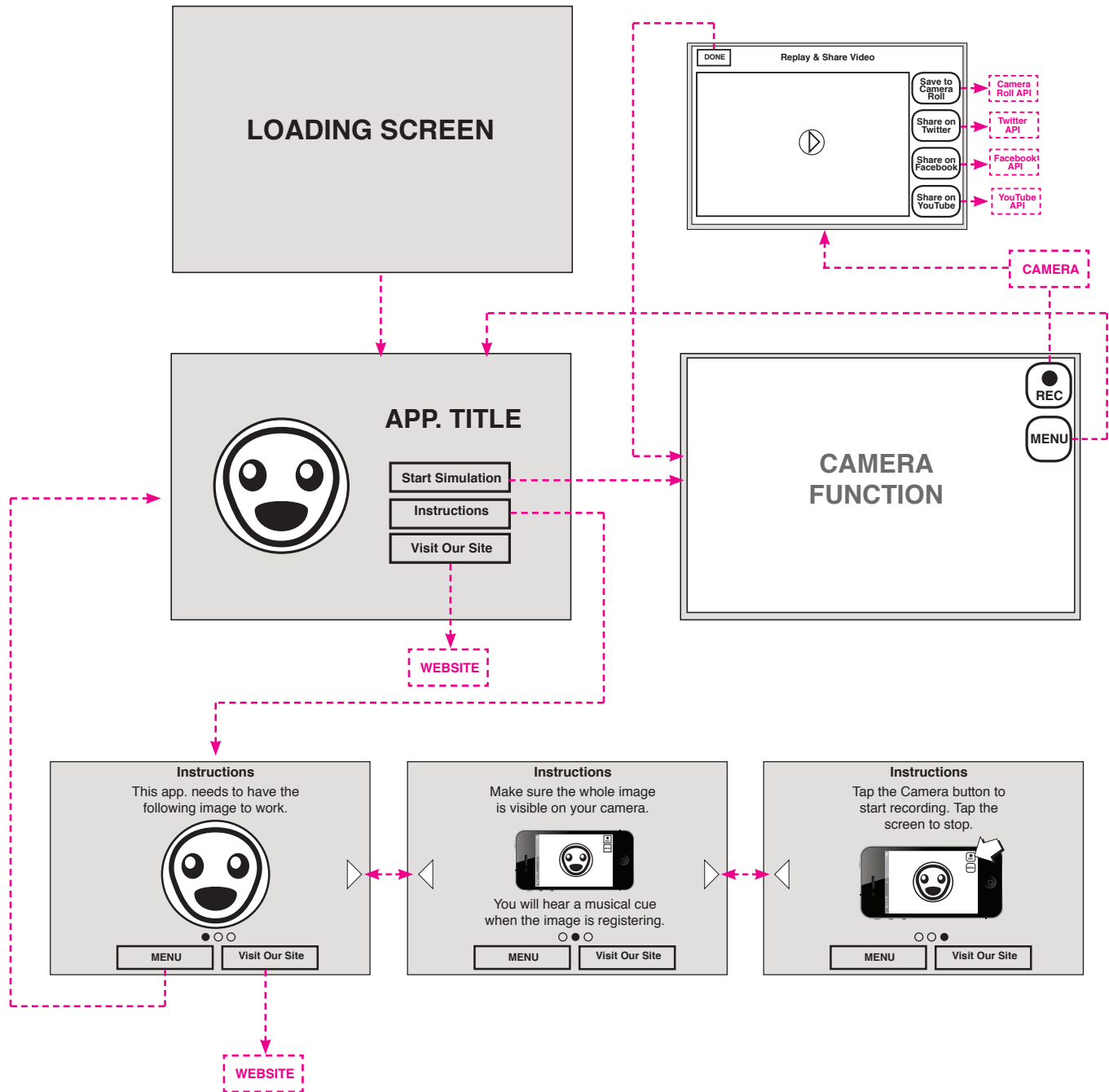
- The character could remind the user of local people in their contact book and ask them if they'd like to talk to them (Phone call cta). The same goes for local businesses in the area that the user has in their contacts.

4.8 Games:

- The character could engage in virtual combat with other User's characters at the same time within view of each other. This could consist of a game like Pokemon, when the Users drop actual image disks and initiate combat between their characters via wifi. This option would be an amazing experience on a tablet device.



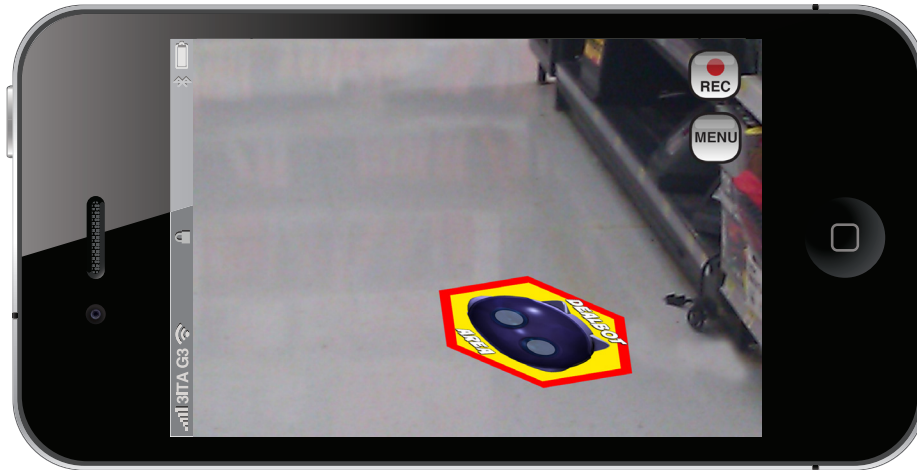
5.0 Application Information Architecture:



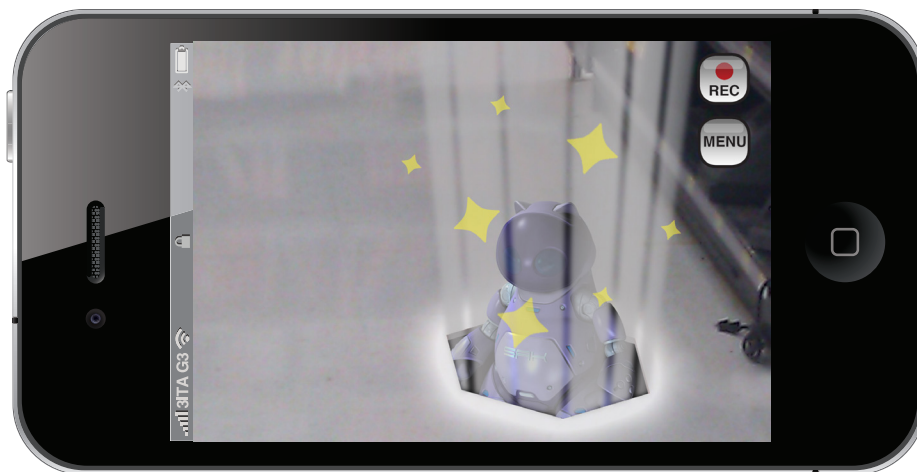
6.0 Branding Sample

Target want's to create something to make the shopping experience in their stores more dynamic and different, something that has never been seen before. They create a campaign around "Dealbot" and offer the Target Dealbot Viewer app. for mobile.

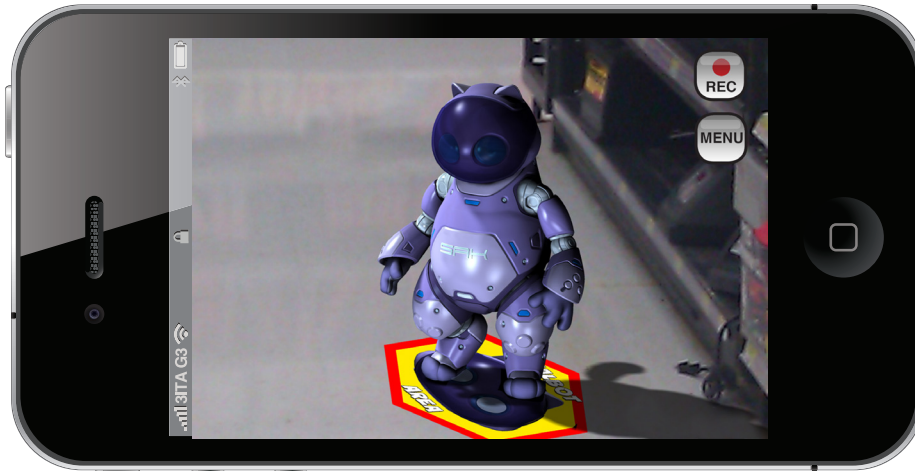
The Customer enters a Target location and sees the Dealbot sticker on the floor. The Customer then utilizes the Dealbot app on their phone and the camera shows:



1. The camera focuses in on the Dealbot sticker as the system tracks the location of the phone via GPS.



2. The app. starts the augmented reality simulation with a 3D Dealbot appearing as if from under the sticker.



3. Dealbot is now fully seen. If the user walks around the character it will appear to have dimension and depth and actually seem to be standing there.



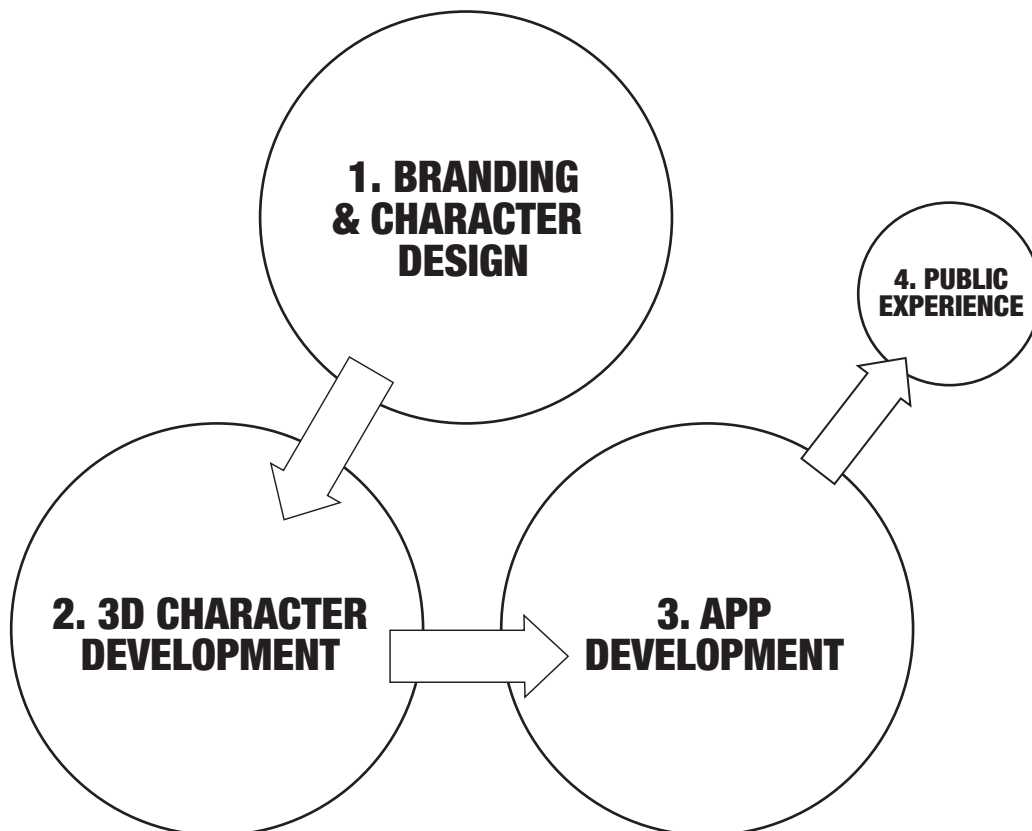
4. Dealbot points out the deal on a certain product. The Customer can record the video or the information can be placed on the Customer's user profile at checkout.

Conclusion: Target now has an interactive immersive experience that Customers will enjoy that no one has ever seen before. Tech news sources (Wired, BuzzFeed, etc) will cover it and buzz will grow around the experience and branding.

7.0 Development

Augmented Reality can be more than just a simple App. It can become an industry in itself. The development of the augmented reality app would consist of 3 main branches:

1. Branding and Character Design: The client would interface with the Branding and Character design team and create a comprehensive branding and advertising campaign for the client. The character designers would design all of the character likenesses and model sheets for the 3D Character Developers.
2. 3D Character Development: This team consists of the character creators. This would consist of model makers (who make the character), texture artists (who give the character a “skin”), 3D rigging (add an animatable skeleton to the character), and the animators (people who add movement to the character based on phone based variables). These artists bring the character to life and send their creation to the App Development team.
3. App Development: This team places the character in the app that goes on the phone. These are the programmers that create the app proper and make it ready for public use and consumption (via the iTunes store or Google Play).



8.0 Future

This technology would lend itself to grow into “Next Gen” technology as it develops. One such possible future technology is Google Glass.

Google glass is a wearable computer with a head-mounted display (HMD) that is being developed by Google in the Project Glass research and development project, with the mission of producing a mass-market ubiquitous computer. Google Glass displays information in a smartphone-like hands-free format, that can interact with the Internet via natural language voice commands. While the frames do not currently have lenses fitted to them, Google is considering partnerships with sunglass retailers such as Ray-Ban or Warby Parker, and may also open retail stores to allow customers to try on the device. The Explorer Edition cannot be used by people who wear prescription glasses, but Google has confirmed that Glass will eventually work with frames and lenses that match the wearer’s prescription; the glasses will be modular and therefore possibly attachable to normal prescription glasses.*



Augmented reality would lend itself to this technology as it grows in scope and stability. This includes a character that the user can interact in realtime anywhere. Possibly having the character show directions to the User or informing them of important updates.