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Briefing

Positioning AR vs. MIR vs. Mobile Tagging

There are 3 new technologies competing for attention on today's mobile phones: Augmented Reality (AR), Mobile Image Recognition (MIR) and Mobile Tagging (MT). This Vizitag Briefing aims to provide a short introduction to all three, position them against each other and illustrate how all they can co-exist together.

Augmented Reality (AR)

AR uses the current view (front end) of the real world visible through your phone camera to display online content (back end) linked to specific objects located within the view. AR does this by using GPS co-ordinates to figure out a 'start position' of where you are and your phone's built-in gyroscopic compass to orientate to specifically what you are looking at. The combination of where you are and what your orientation is allows the AR software to resolve to back end content that adds some perspective to what it is you are looking at. AR can also layer different 'virtual' views over your current 'reality' literally as you change it by changing your position or the orientation of your phone. This presents the potential for an ever-changing range of user-selectable perspectives to augment your reality with a wide variety of online information.

Mobile Image Recognition (MIR)

MIR matches an image that you focus on/snap with your phone camera (front-end) to content that is linked to that image (back-end). When you focus on or snap the image it is sent as a picture message to a back end application that matches the snapped image to a pre-existing image in a database in order to deliver content linked to that image back to the mobile phone.

Mobile Tagging

MT matches a unique image in a specific tag format (front end) that you snap with your phone camera to display content that is linked to that image (back end). The tag snap could simply resolve to a website URL or piece of text that is delivered back to the mobile phone user via their browser or it could link to a purpose-built mobile page or site that in 'pointed' to via a pointer in a back end database.

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Technology Positioning

AR is location and orientation centric. It is concerned with linking content to your current real-world context as represented by your phone's location position and orientation. AR can present different perspectives on your current locational context. AR is great for:

- Finding stuff nearby where you are now
- Learning more about what you see around you
- Connecting to or finding out about people around you

A drawback with AR is that the content layers need to be linked to positioning co-ordinates in a back end database and will need to be regularly updated.

MIR is image centric. It is concerned with recognizing an image – wherever and on whatever it is located – in order to deliver content linked to that specific image. MIR could also use location-based data to vary the content delivered depending on location. MIR is great for:

- Leveraging existing images (e.g. book/cd/dvd covers)
- Linking printed or poster brand logos to online content
- Associating a face with online content

A drawback with MIR is that the image needs to have been processed and added to a back end database before it can be recognized and resolved to by the MIR-enabled phone camera.

MT is content centric. It is concerned with recognizing a specific kind of image - a tag - located on or next to a specific object or place or printed item (e.g. an advertisement) in order to deliver content linked to that tag. MT doesn't care about location since this can be 'pre-coded' into the tag and in any case tagged objects are often not location-specific. MT is great for:

- Putting on physical items to link them to online content
- Linking a specific thing to specific online content
- Linking content in printed matter to online content

A drawback with MT is that the tag needs to be created and then deployed (i.e. stuck on, printed on) to the physical object.

Use Case: A Winery

Imagine you run a winery and need to understand how you can leverage these technologies to reach a new audience via their mobile phones: What could you do? Let's say your rationale for leveraging these technologies is that you want to engage consumers with your wine and enhance the visitor experience of your winery tours.

Engage Wine Consumers

Here we are focused on the wine bottle and providing more information about the wine or encouraging the user to buy more.

AR would be a poor choice here since the locational context of a wine bottle is largely irrelevant. However the wine bottle's 'front' label could be used by MIR to deliver useful content when snapped as could a tag that has been printed on the wine bottles 'back' label. Both MIR and MT could enhance the experience of shopping for the wine (you could snap the label or tag in the store), drinking the wine (you could snap the label or tag before opening the bottle for serving/food tips) and make it easier to sell more wine or cross-sell specific wine related products (e.g. wine racks, openers or food).

Enhance Winery Tours

Here we are focused on enhancing the visitor's experience of the winery while on a guided or self-guided tour.

MIR is probably the least useful choice here since there will typically be few pre-existing images already present around the winery to recognize and link content to. MT is the next best choice, especially for a self-guided tour, as tags could be located at various 'stops' on a winery 'trail' so that they can be snapped to resolve to useful content about what you are looking at or where you are now. AR is probably the best choice because a winery specific content layer can be developed so that as the visitor wanders around – whether part of a guided tour or self guided – they can augment the reality of what they see with the content delivered by AR.

In other words, AR, MIR and MT could all be used to your advantage.

Dependencies

All 3 technologies have dependencies:

Shared

- A camera-enabled mobile phone
- A fast internet connection available to 'invoke' the service
- An internet browser on the phone
- An AR/MIR/MT tag reader application installed on the phone

AR

- Location-based services on the mobile
- Gyroscopic compass built-in on the mobile
- A back end database with a content layer linked to the precise co-ordinates and orientation of a given location.

MIR

- MMS enabled on your mobile phone
- A back end database storing 'pre-processed' images that are used to match to the snapped image and linked to content.
- Optional - Location-based services on the mobile

MT

- Use of a specific tag format (e.g. QR Code, Datamatrix, MS Tag) to create the tag image to deploy
- Optional - Location-based services on the mobile

All three also require some kind of mobile content management system (MCMS) for individuals/businesses to manage the AR content layer or the content linked to by an image or the content linked to by a tag.

Sample Links

AR layar.com
MIR kooaba.com
MT vizitag.com