Smile! You're on candid camera!

Aerial Photography resolution has increased to up to 4cm; satellite imagery to up to 41cm. This has raised new privacy, safety & security concerns from the public as well as from governments across the world. Combined with new products offering geo-referenced street level views, building models and 3D terrain models, we ask ourselves if these concerns are legitimate.

On a national level there is a concern for safety and security especially after incidents such as 9-11 in the USA where gaming technology combined with geo-referenced imagery and 3D building models assisted the attackers in their planning and training for their mission.

Prior to 1980 the South African government restricted aerial photography over areas of importance where loss, damage, disruption or immobilization may have had a negative impact on South Africa. With the subsequent proliferation of satellite imagery it was an impossible task to implement the restriction of aerial imagery and the National Key Points Act was established that prohibited the flying of high resolution aerial imagery over National Key Points. Other than the National Key Points Act, the only way to control or restrict the capture of high resolution imagery is by introducing flight restrictions and creating no-fly zones over sensitive areas.

A decade ago aerial photography was the domain of mostly governmental and military organizations with distribution limited to professionals for planning and data capturing purposes. However, aerial imagery has been *"brought down to earth"* with global datasets freely hosted on the internet by companies such as Yahoo, Google and Microsoft. The supply/demand and marketing competitiveness have encouraged the development of products such as geo-referenced street level view imagery, 3D terrain models and building models.

The geo-referenced imagery is currently being utilised in traditional as well as non-traditional markets such as:

- Gaming
- Insurance (before & after, extent of damage)
- Property Evaluations
- Building restrictions
- Architectural overlays & 3D building models
- Visual Media
- Police and Law Enforcement
- Emergency Response and Disaster Management
- Town Planning, Engineering, Survey and Mapping
- Satellite and Cell Phone Navigation Systems

The geo-referenced high resolution ground based imagery with a street level view combined with an aerial view has created a new wave of suspicion and unease amongst the general public. However, the information depicted in geo-referenced imagery (aerial and street level) is no different to what we see while flying overhead with an aircraft (plane, balloon or micro-light) or walking\driving down the street. The imagery is captured from a public space and is therefore not considered an invasion of privacy. The same law allows the paparazzi to capture images of celebrities when in public as well as aerial views of their mansions. You cannot expect any privacy when in a public space.

In many countries the free service of these datasets has been the cause of legal action being taken and the hosts of the imagery have taken precautionary measures to ensure privacy laws are adhered to. Automated recognition software programmes to blur faces and vehicle registration numbers prior to the images being published have been designed. The public is allowed to request that face(s) or an individual's house are to be removed or blurred after publishing.

The thought of criminals utilizing the imagery for non-legitimate purposes such as the conduct surveillance of the general layout of their target (banks, government buildings, nuclear plant or private residence) and planning their access, trespassing, attack and escape routes via free media has caused a stir. A potential burglar could save time standing around on street corners, looking suspicious and alerting their target or being captured on CCTV while making their plans.

However, these same datasets are used during search and rescue operations, saving many lives during times where no other information can be assessed. During a time of crisis the emergency services use the information to reach people in distress and the police and security services have increased their usage of the information to assist with the capture of criminals by identifying where they are located, how to access the location and to ensure all escape routes are covered.

What is the application of street level view imagery? Property Evaluators often make use of street level views to establish property value, as well as to establish whether building restrictions have been adhered to. Other Property Evaluators, curiosity value or for house hunting, is there really a commercial value for street level imagery apart from being used by property evaluators, serving curiosity value and assisting with house hunting?

So ask yourselves if these images are an invasion of your privacy as well as a threat to your safety & security. Is there a real need for the high resolution geo-referenced imagery and what is the commercial application thereof? The imagery placed in the public domain is often 1 to 5 years old at the time of publication so how big is the threat? Is there any difference between these images being hosted or being captured on CCTV or webcams? Is the right to your privacy taking a back seat to commercial applications and, if so, what are these commercial applications?

Are you willing to give up your GPS, Google Earth, safety services and access to information for increased privacy, safety & security?



Esna Swart

eswart@kartosurveys.co.za
Mobile: +27 (0)71 011 8044