



Map of human intelligence

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Technology is as good as the minds using it; if terrorists try to deploy it to their advantage, it can also be used to beat them

Among the most strategic projects of the British Raj was the Great Trigonometric Survey of India: Unexplored and often deserted regions had to be mapped with precision. London urgently needed geographical information to counter the Russian Empire advances into Central Asia. Cartographic knowledge was therefore of utmost value in the Great Game.

In the 1860s, one Captain Montgomerie working for the Survey thought of using Indian 'native' spies to map Tibet. He believed that the solution was to train Indians from 'border states' such as Ladakh, Lahaul-Spiti or Sikkim to become surveyors; they were easily disguised as traders or lamas and thus wander unnoticed on the high plateau. They were nicknamed Pundits.

The way the 'pundits' worked is worth mentioning. They were trained in Dehra Dun to pace long distances with steps of equal length. To keep track of the number of steps from one place to another, they used a very simple device: A mala of 100 beads. In the evening their trigonometric findings were computed with the number of paces and hidden in a prayer mill. All pilgrims carried one!

Their exploits flashed back to me when during a recent stay in France, a friend asked me: "Do you want to see where you live?" Before I could answer affirmatively, he opened 'Google Earth'. After slowly focusing on France, on Paris, on his neighbourhood, we saw his house and the small garden behind. It was amazing. I knew about the NASA or ISRO's satellite imagery, but to see it

in a private citizen's home was fascinating. I could only marvel at the progress humanity has made since the time of the Pundits.

I also remembered that a month back a controversy had erupted in India about Google Earth. The Chief of Army Staff, General JJ Singh, had complained that Google Earth's pictures gave high-resolution layouts of New Delhi's international airport, including the Palam Air Force base; it could be a fairly good advantage to anyone plotting an air attack. He had added "countries must join hands to stop such open access to their installations".

Already in 1999, the National Security Archives of George Washington University in an article U.S. Satellite Imagery, 1960-1999 explained: "The use of commercial imagery has expanded dramatically with the new generation of commercial imaging satellites which include images with one metre resolution. Such imagery and the reduced cost of attaining it when purchased commercially will permit the US intelligence community to fill part of its needs via such commercial systems." Ironically, the week that Army Chief protested against Google Earth, the same National Security Archives published an Electronic Briefing entitled 'US Intelligence and the Indian Bomb' in which a picture of Trombay, the site of India's first nuclear reactor, was shown. The picture was taken in 1966 and is more accurate than Google Earth's!

I am not a defender of Google, but the fact is that technology is progressing fast. It is unstoppable and should be used for the good of humanity. One could also argue that cellphones or the internet can be used by terrorists, but is it a reason to ban their use? On the contrary, these very tools must be used to defeat them.

A year ago, the Centre approved a new National Map Policy. It provides for the release of two series of maps, Defence Series Maps (DSMs) for defence forces and Open Series Maps (OSMs) for the public. The responsibility for the OSM maps remains with the Survey of India under the Department of Science and Technology. Unfortunately, though the OSMs can be produced to any scale,

their use is governed by a system of registration for resolution higher than a scale of 1:1 million. Everyone knows the meaning of 'registration' in India.

The Government's intentions were good: "The new National Map Policy is the result of a conscious realisation that technological upheavals taking place around the globe have rendered many features of the existing Map Policy redundant and anachronistic." But this policy, like many others, has missed the bus. Today it would be "redundant and anachronistic" to take on Google Earth: This type of information is freely available on any PC abroad, whether in Pakistan, China or the US.

Considering that General JJ Singh has himself stated that one of the main problems in the Siachen tangle is that Pakistan refuses to indicate its position on the ground, why can't India publish detailed maps of the glacier indicating the ranges it controls, thus calling Gen Musharraf's bluff? It would become clear that Pakistan's claims are not so tenable. Another aspect should not be forgotten: Humint (Human Intelligence) plays as important a role in modern intelligence gathering. The already mentioned Electronic Briefing of the National Security Archives on the Indian bomb show through recently declassified documents that though the US possessed the most detailed satellite imagery (in 1974 and in '98), it was unable to detect preparations for Pokhran-I and II. The moral of the story: US intelligence agencies too may need 'pundits' to discover Indian plans. Satellite imagery is not enough.