

France and Kiruna, Sweden. These stations produce imagery for SPOT Image and Satimage, its Swedish sister-company. They can collect imagery from anywhere in the world by using the onboard recorders and recorder-playback telemetry mode.

**Landsat**

The U.S. Landsat 5 satellite has two primary imaging sensors: the Multispectral Scanner (MSS) and the Thematic Mapper (TM). Table 2 outlines the characteristics of the two sensors. Both sensors are capable of only vertical viewing, effectively restricting the satellite to a 16-day revisit capability assuming no cloud cover.

The Multispectral Scanner has four bands, sensitive roughly to green, to red, and to two bands of near-infrared light.<sup>7</sup> The spatial resolution is poor compared with what is available from the other systems. However, if the level of resolution is sufficient, broad area coverage with the MSS is more economical with its 185-km swath width and lower cost per scene.

Thematic Mapper images have additional bands with finer spectral, spatial and radiometric resolution. TM bands 2, 3 and 4 correspond roughly to the three multispectral bands provided by SPOT. TM band 1, sensitive to blue light from 0.45 to 0.52  $\mu\text{m}$ , was intended to provide increased penetration into water bodies.

**Table 2**

**Characteristics of the Landsat Sensors**

	<b>Multispectral Scanner</b>	<b>Thematic Mapper</b>
Swath width	185 km	185 km
Spatial resolution	79 m $\times$ 79 m	30 m $\times$ 30 m
Spectral bands		0.45 – 0.52 $\mu\text{m}$ (blue)
	0.50 – 0.60 $\mu\text{m}$	0.52 – 0.60 $\mu\text{m}$ (green)
	0.60 – 0.70 $\mu\text{m}$	0.63 – 0.69 $\mu\text{m}$ (red)
	0.70 – 0.80 $\mu\text{m}$	0.76 – 0.90 $\mu\text{m}$ (near IR)
	0.80 – 1.10 $\mu\text{m}$	(near IR)
		1.55 – 1.75 $\mu\text{m}$ (mid IR)
		10.40 – 12.50 $\mu\text{m}$ (thermal IR) <sup>*</sup>
		2.08 – 2.35 $\mu\text{m}$ (mid IR)
Radiometric resolution	64 gray levels	256 gray levels
* The thermal infrared TM band has coarser spatial resolution (120 m) than the other bands.		