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## IT-Enabled Services (F): Teleradiology Solutions Inc.

Dr. Arjun Kalyanpur founded Teleradiology Solutions, Inc. (TRS) in Bangalore, India in 2000. Dr. Kalyanpur is a U.S. trained radiologist with experience at Cornell and Yale, and is currently affiliated with the radiology faculty at Yale University. In late-2002, TRS employed four U.S.-trained and certified radiologists, who were supported by seven Indian-trained (but not U.S. certified) radiologists. FY 2002 revenues exceeded \$3.5 million, with operating margins of more than 50%.

Teleradiology offers radiology services from its facility in Bangalore to hospitals and radiology practices throughout the US. The company offers on-call interpretation of all noninvasive imaging modalities<sup>1</sup> with an average 30 to 40 minute turn around. Current clients include Yale University School of Medicine and the University of Minnesota School of Medicine. TRS also works with more than 30 hospitals and radiology practices in seven states.

TRS allows U.S. hospitals to access skilled workers in India, resulting in reduced late-night demands on interns and lower costs. The U.S. has a severe shortage of trained radiologists—estimated at more than 20% in 2000—and the situation was projected to worsen over the next decade. Night duty is considered unattractive so remote provision can help with staff retention and recruitment. It also allows for reallocation of existing staff to peak periods (typically days), thus allowing a practice to grow. There are also quality benefits. Several studies (undertaken and published by Dr. Kalyanpur) show that Indian radiologists offer faster response, are likely to be more alert, and are less likely to be interrupted, than are on-call radiologists.

Teleradiology is able to offer significant cost savings to its clients. The cost of hiring a “nighthawk” radiologist in the US is considerable (one group in New York offers nighthawks \$200,000 per year to work one out of three weeks). U.S.-certified radiologists are available in India for about \$28,000. TRS offers radiology services for approximately 80% of the rate charged by independent U.S. nighthawk services. Operating margins exceed 50%.

Key issues facing Teleradiology and other radiology outsourcing start-ups include U.S. Board certification, state-by-state licensure, and malpractice insurance. Kalyanpur and his core staff are all board certified and licensed in the seven states where TRS offers services. Expansion is limited by the state licensing process, which generally takes two to six months and, in many cases, requires an in-person interview.



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