Traditionally the competency of an IT worker has been largely measured in technical terms. The ability to understand and deploy complex technology was seen as the critical skill required. However, the environment is changing. The time where applications could simply automate tried and tested manual processes with the confidence that immediate benefits to the business would result, is now past. The industry has matured to the extent that current IT applications need to develop and evolve hand in hand with the business. The ability to fully specify the requirements for an application, and then have them passed “over the wall” to the IT department for delivery has gone. Even with so-called packaged ERP software, instances where the software can be deployed without customisation or significant configuration are few and far between. With customisation comes relationship requirements with the business users, and therefore increased governance requirements (Wang & Chen, 2006). A recent study of staff interaction requirements found that up to 80% of staff job descriptions now require significant levels of personal interactions (Johnson et al., 2005). What is clear is that relationships between IT staff members, and between IT staff and their business clients have become a critical success factor.

The Open source software (OSS) movement has uncovered another IT worker competency, and that is to be able to work in a network consisting essentially of volunteers. Open source software development has now been legitimised by the industry through the support and adoption of many of the major market players.
like Sun Microsystems, IBM and HP. OSS is largely developed by large teams of volunteer programmers, cooperating virtually via e-mail and the Internet to develop an end product. Companies like IBM have contributed large amounts of previously proprietary software code to OSS development projects. OSS is a significantly different organisational model for the development of software to the traditional corporate model. Workers in OSS projects may have similar technical competencies to their corporate worker colleagues, but the organisational competencies required to be effective in the given organisational context is substantially different. In fact the “good corporate IT worker” could be seen as the antithesis of the good OSS IT worker in terms of organisational effectiveness. As more corporations adopt the OSS model the need for the IT worker to learn new organisational competencies becomes paramount.

For the IT executive, the contrast between working in a traditional one-to-one governance arrangement, to one where the governance is more about personal influence than legal contracts, challenges traditional executive competency requirements. One on one negotiation skills are no longer enough. To effectively operate in a networked environment the IT executive will need to learn new political influencing skills and also learn to effectively manage their own personal networks.

This chapter looks at a number of contradictions in the IT industry in terms of the competencies required to operate effectively. Underpinning the new emerging competencies is the ability to work in a network. Whether they are multisourcing networks, open source development networks or alliance networks, the required competencies are similar. The coexistence of sole sourcing and multisourcing, corporately developed software and open source software, and corporate IT infrastructure with public IT infrastructure, each provide a contradiction in terms of competency requirements to be resolved.

The science of social networks is used to help identify the competency requirements for the networked world. Each of the above contradictions emphasises the need to be able to manage within networks. A basic tutorial on Social Network Analysis (SNA), the key analytical technique used for studying social networks, will be provided. This will be followed by two sections looking at management competencies and then IT worker competencies. Finally a section will be provided on linkages between personal networking competencies and performance.

**Tutorial**

**Social (Organisational) Network Analysis: An Overview**

The invention of the sociogram is often credited to a social psychologist, Dr. J.L. Mareno, who used it to map “liking” and “disliking” relationships between New
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