***An Analogy: Each LAN Is an IsLANd***

**LANs and WANs**

We will use another analogy to illustrate the VPN concept from a different point of view.

Imagine that you live on an island in the ocean. Thousands of other islands are all around you, some very close and others farther away. The normal way to travel is to take a ferry from your island to whichever island you want to visit. Traveling on the ferry means that

you have almost no privacy. Other people can see everything you do.

Assume that each island represents a private LAN, and the ocean is the Internet. When you travel by ferry, it is similar to when you connect to a web server or to another device through the Internet. You have no control over the wires and routers that make up the

Internet, just as you have no control over the other people on the ferry. This leaves you susceptible to security issues if you try to connect between two private networks using a public resource.

**Leased Lines**

Your island decides to build a bridge to another island to create an easier, more secure, and more direct way to travel between the two. It is expensive to build and maintain the bridge, even though the island you are connecting to is very close. But the need for a reliable, secure path is so great that you do it anyway. Your island would like to connect to a second island that is much farther away, but you decide that this would be too expensive. This situation is very much like having a leased line. The bridges (leased lines) are separate

from the ocean (Internet), yet they can connect the islands (LANs). Many companies have chosen this route because of the need for security and reliability in connecting their remote offices. However, if the offices are very far apart, the cost can be prohibitively high—just

like trying to build a bridge that spans a great distance.

**VPNs**

So how does VPN fit into this analogy? We could give each inhabitant of the islands his or her own small submarine with these properties:

■ Fast

■ Easy to take with you wherever you go

■ Can hide you completely from any other boats or submarines

■ Dependable

Although they are traveling in the ocean along with other traffic, the inhabitants of our two islands could travel back and forth whenever they wanted to with privacy and security. As long as they have access to the ocean, private access exists between any two islands. This is

essentially how a VPN works. Each remote member of your network can communicate in a secure and reliable manner using the Internet as the medium to connect to the private LAN.

A VPN can grow to accommodate more users and different locations much easier than a leased line. In fact, scalability is a major advantage that VPNs have over typical leased lines. Unlike leased lines, where the cost increases in proportion to the distances involved, the geographic locations of each office matter little in the creation of a VPN.