ITHACA, N.Y. -- Business lore has it that Jack Welch, the chairman of General Electric, called his division heads together at one point during the 1980's and told them to abandon any product that was not one of the top three in its particular market. Pursuing that strategy has made the company one of the most successful conglomerates in American business history.

The same logic helps to explain why an Internet access provider like America Online would want to merge with a traditional media conglomerate like Time Warner. The domain of entertainment and communications, even more than G.E.'s world of manufacturing, has become an environment where success breeds success. The technological imperative is to dominate or perish.

In entertainment and communications, even more than in General Electric's business, many costs are fixed, and the cost of serving additional customers is generally small. The cost of producing a movie or writing Internet access software, for example, is essentially the same whether the product attracts one million buyers or 100 million.

So the more customers a company serves, the more cheaply it can sell its product and still make money, which often makes the battle over market share decisive. Investments aimed at enhancing the quality of the product are the most important weapons in that battle.

If Time Warner's Home Box Office bids for star performers or spends more on elaborate special effects for its made-for-TV movies, it can attract more subscribers, yet it will not have to charge each customer a higher price to cover its increased costs. And having a better product would help HBO lure subscribers away from Showtime and Cinemax, reinforcing the initial advantage.
Similar forces govern the contest to provide Internet access. Because many of the biggest costs of delivering Internet service are fixed, the average cost per subscriber declines sharply with the number of subscribers served.

Additional advantages come from having a larger network of customers. When a subscriber wants to check e-mail while traveling abroad, for example, he would prefer not to make an international toll call; only a provider with a dense global network can hope to maintain worldwide local access numbers in cities of small or medium size. Users of the same Internet service also benefit from sharing a platform in common, giving them access to common chat rooms, instant messaging services and other features.

But why does AOL need Time Warner now that it has already established itself as the dominant global Internet access provider?

The answer is apparent when you compare how much more rapidly you can download information from the Web when using your employer's commercial fiberoptic service than when using the telephone modem system at your home computer -- the system that is the backbone of AOL's current service.

American Online is dominant now, but it is unlikely to remain so unless it can find a way to match the service that can be offered to subscribers on high-capacity fiberoptic networks. More and more Internet service is likely to be delivered in the future not through telephone lines, but over the high-capacity networks that now deliver cable television.

Time Warner's Roadrunner is one of the largest providers of cable Internet access. With extensive cable TV holdings spanning 33 states, Time Warner is ideally positioned to provide the faster Internet connections that consumers now demand.

And since some of what consumers are expected to get over the fast new networks is entertainment, Time Warner stands to benefit, too, by having a partner that is already a powerful Internet presence.

Of course, if the two companies were not to merge, AOL could try to form independent alliances with other cable TV providers. And Time Warner could continue to deploy its cable assets in expanding its own position as an
Internet provider. But each of these efforts would be extremely costly and fraught with risk.

In contrast, a merger improves the chances that current stockholders of both companies will end up as winners in the new world where television and the Internet are delivered through the same cables.

Time Warner stockholders who failed to see big profits from the combination of Time and Warner Brothers need to understand that this new merger is not solely about expanding content -- the kinds of entertainment offered. It is also about staying alive in a new technological universe.

Consumers are also likely to benefit, since the merger will hasten the arrival of high-speed Internet access to homes. And if the combined company succeeds in its efforts, the quality and availability of Internet access should increase worldwide as well.

Should the Justice Department be worried about this merger? At this point, there seems to be little reason. But if AOL's control of a local cable TV network were an important barrier to competition in delivering Internet services, a simple remedy would be to require the company to lease access to outside providers, much as regulators now require local telephone companies to let others use their wires.

The merger would also provide competition for AT&T, which through its purchase of the cable television network Telecommunications International is now positioned to become one of the largest providers of fast Internet service.

Communications and entertainment markets are classic winner-take-all markets. To remain in the game, companies must play to win.