

Dr. Waclawsky presented to us the ecology of the standardization process. He argued that while we are interested in the interoperability of different applications, the applications should be inherently different because of their competition nature. Standardization designs the common ground across different applications, the de facto application wins over its competitors and become the common "gold standard". Waclawsky extended the OSI model to include three more layers for competition issue and described it as a selective permeable membrane for technologies in between the restricted and open competition environments:

1. L8 Revenue and Profit
2. L9 Politics
3. L10 Technology Religion

Most of the technologies such as web/email moves from the open environment to the restricted environment in the lower layers. One important issue that he mentioned was because of the competitive nature of the companies, the participants of the standardization groups are not interested to establish a standard but rather push their own technologies to become the standard. Otherwise, the government and politics has to be involved when mandating a certain practice, such as the OSI model. However as a result, most technologies from the open environment to win the competition and become de facto.

The differences are the motivation of the development, without differences and conflicts, there is no evolution. Thus, there is no doubt to observe the differences between open and close competition. In fact, each side encourage the other side to evolve. In our opinion, the openness of the open environment leads to innovation but reduces the optimization and vice versa for closed standardization process. What we need to design is a playing field where every rule is clear and transparent to all the players. The technical solutions might be somewhat close but all the choices and their related information should be left open.

The style of development also differs in the closed standardized environment and the the open environment. It is a system model versus a component model or it can also be described as centralized and decentralized control schemes. As Dr. Waclawsky showed the observation of open components moving to the system side, we believe the inevitable question becomes the interoperability of the components. How would one combine the components? And how can we accelerate the open environment converge to some sort of open interface? Once the technologies preferences are eliminated, can we use some influence from the closed model, particularly through the business or politics layers?

There was a brief discussion on contents versus social interactions. It is social interactions that drives the technology usage and eventually establishes de facto standard. But, similar to the technologies in the standization groups, this is somewhat biased to commercials perspective because contents might have values on their own, which is often perceived in academic or research community. That is, protocols and standards might have not started to initiate the technology usage, but rather, designed to preserve or project the values in the contents themselves. Another interesting issue is that many technologies received extensive research efforts appear inadequate or ineffective in reality. One example is the Quality of Service (QoS) . There is a substantial amount of research papers on QoS, queuing policy, and differserv. However, since fiber capacity has shifted the bottlenecks from network to nodes, employing a QoS configuration may possibly just make a bad situation worse.