

All Data Are Not Created Equal

**The shortest distance between two points is the strait line
Euclid?**

After reading *The Evolution of Storage*, the introduction to the Network Appliance article in the June issue of the RTWR, I am reminded that all data are not created equal. Previous to Network Attached Storage (NAS) all data had to flow through the computer on its way in from the user and on its way back to the user for the simple reason that the computer sat between the user and the storage.

In the bad old days, all roads used to go to the city and through the city. After a while city planners discovered that there is a lot of traffic that does not have to go through the city but can go around the city. Route 128 in the Boston area is the result of this piece of wisdom.

I like to think of data as being of three sorts, static data, dynamic data and control data. Music, for example, is static data and every copy of version X of *Lucy in the Sky with Diamonds* should be identical to every other copy. The same is true of installer software, every copy of the System 10 installer for the Mac should be identical. There is absolutely no reason for static data to go through the server on its way to the user. The reasonable way to handle static data is to put it somewhere on the network and when a user requests it from the server, the server should send the storage appliance instructions for delivery including the destination URL. In a word, **drop shipping** is the right way to deliver static data.

At the other end of the spectrum, control data is used by the server to organize and control all the information that needs to be received, processed, stored and delivered and control data needs to be near to the server and easily accessible by the server. Attached storage or its derivative, storage attached networks (SAN) is probably the right place to keep control data.

An example of dynamic data, in this conception, is an entry created to record a credit card transaction. The "contents" of the record will not be changed but the way it is combined with other data for processing will vary and that processing will be done by a server. Other dynamic data in this context could be your address

with does change from time to time. Dynamic data can live on different kinds of storage throughout its lifetime. The credit card record might be stored on SAN until the monthly statement is printed and then sent to a NAS storage for say, 5 years, after which is it placed in an archive where it is not likely to be looked at ever again.

Route 128 made no sense in the days of the horse and buggy. Even if it helped reduce the amount of horse manure in the streets of Boston, it would not reduce travel time from one end to the other of town. The extra distance was not compensated by the lesser amount of traffic nor by the faster speed on the scenic route. The enabling technologies that made Route 128 feasible were the motor car and the expressway construction. The enabling technology to make this sort of data distribution feasible is, precisely, the NAS appliance. In this sense, Network Appliance could be enabling its own market.

**The longest distance between two points is the unknown shortcut
Anonymous lost traveler!**

Denny

"Demand creates queues. Supply gets rid of them."

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