

A Revolution is Coming: Information 2.0

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All of us in IT talk about how much information has been growing over the past decade. Now, a new white paper from IDC tells us that information growth will actually accelerate over the next few years. IDC predicts that the amount of information created and replicated annually will increase sixfold from 2006 to 2010. This translates to 988 exabytes of information in 2010!

Given the amount and new types of information we will produce in the future, we need to completely change how we think about information. Access to information in the future, I believe, will be flat, deep, and specialized.

Flat access simply means that the conduits to obtain information will be very direct. YouTube is a perfect example. With just a single intermediary, you can publish video for direct consumption worldwide to anyone with a network connection. There is no longer a filter or limited set of outlets for access to consumers of information.

Access to information will also be deep. This is a direct correlation to the "Long Tail" principle. Consumers and employees will have access to more and more sources of information with ever-higher degrees of specialization.

Information will continue to evolve and become more specialized. Simply put, we will be able to build personalized "information services" that deliver the very specific information we require for a given situation.

While these concepts are more and more visible on the web, they will change in the future how businesses and organizations manage information. For organizations to get the maximum value from their information, they must evolve how they think about it.

WHERE TO START? I WOULD LIKE TO SUGGEST EIGHT RULES FOR INFORMATION 2.0:

1. Information is decoupled from applications.

Information buried within applications has limited value; it cannot be utilized by other applications or people. Moving from application-centric to information-centric computing means the information is not constrained by the application where it resides. When information, freed from the application, can be shared and leveraged across the enterprise, it is possible to extract more value from the information.

2. Information is accessible via web services. Information is only valuable if it's available and accessible; therefore, information services and web services must be one and the same. Viewing information as a peer to the application allows for connections from applications to in-

formation at the highest levels, providing capabilities for managing information more effectively than ever before.

3. Information metadata is integrated with all data.

Ninety-five percent of all information is unstructured—videos, photos, and music not suitable for management within a relational database. Adding structure to unstructured information in the form of metadata allows the information to be indexed, queried, and searched. Embedded metadata is the enabler that transforms information from static to dynamic.

4. Information security is explicit and built-in.

Firewalls assume two things: Everyone inside your organization is good, and everyone outside your organization is bad. Rather than building moats in the form of firewalls, organizations need to protect two things directly: the data and the identity of those using the data, regardless of where either resides.

5. Information optimizations are built in as services.

Regardless of the application in use or where the data resides, decisions about the information must be made: What tier of storage? What protection levels? How is the information backed up? Decoupling information from applications allows services such as tiering, virtualization, and consolidation to be delivered as a set of services to applications. In an information infrastructure, optimization is delivered as an information service.

6. Information is personalized.

Every 1,000 knowledge workers costs an organization \$5.3 million annually as these workers burrow their way through repositories, file systems, and archives to find the information they need. The cost of lost, misplaced, or unidentifiable information is exorbitant. Therefore, to create value, we must place the right information in front of the right people at the right time based on every individual's changing needs.

7. Information is delivered both in real time and on demand.

More and more, information will be delivered in two ways: real-time and on-demand. However, over time, I predict the decline of real-time delivery and the rise of on-demand delivery. We will watch first-run movies and network television programs during our own

leisure time, not on a network schedule. The capabilities required to facilitate the rise of on-demand (more connectivity, more capacity, and more bandwidth) are becoming a reality.

8. Information is simply always available.

As we build out information infrastructures with hundreds of applications, and thousands—or hundreds of thousands—of users, we are entrusted with not only mission-critical information, but also life-and-death-critical information. IT systems and architectures must allow for zero downtime. Because you can never be 100% sure of who is accessing what type of information at what time, IT infrastructures must never go down. End of story.

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