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Getting Real –
The Time Continuum for Data

HOW CAN A COMPANY DIFFERENTIATE FROM GOING NOWHERE FAST TO RECEIVING REAL VALUE FROM COST-EFFECTIVE AND APPROPRIATELY TIMED DATA DELIVERY?

Regulatory compliance. Single view of the customer. Business performance management. Supply chain optimization. What do these strategic initiatives have in common? They all require integrated, accurate, reliable and, most importantly, timely data. IT's job is to guarantee a consistent and available supply of this data; but to do that, IT must also understand its technological limitations and the true nature of the business problems being resolved.

The push today for these initiatives and others is toward a "real-time" enterprise. Numerous articles, presentations, time and money have been spent pursuing this ideal. The promise of increased sales, better efficiencies, faster time to markets, lower operating costs and better customer relationships are all the nirvana every company wants for itself. But what does this mean? Must every enterprise be a real-time one? Does every application have to run in real time? How can a company differentiate from going nowhere fast to receiving real value from cost-effective and appropriately timed data delivery?

Let's face it – putting up-to-the-second data in the hands of the entire corporation is extraordinarily expensive, creates a major burden for IT and is simply not needed in many cases. We need to take another look at the real-time scenario with a more comprehensible and pragmatic approach. It is time to realize that what corporations need is not universal real-time data delivery but rather "right-time" or "on-demand" data delivery. Data delivery should be viewed as a time continuum for presenting integrated data rather than a set of discrete processes. This continuum does not deny the basic need for a real-time enterprise but may avoid unnecessary or inappropriate data delivery velocity.

The right-time data delivery continuum is a mix of instantaneous, rapid intermittent, or longer batch-type processes – each yielding a different delivery time frame (see Figure 1). For example, a securities trader will need immediate access to stock market data. Credit card approval may appear to have immediate access to customer data; however, in reality, it takes a few seconds for approval to occur. Order fulfillment information may be gener-

data delivery capabilities (e.g., available technologies, maturity of the business intelligence architecture, existing personnel) combined with a solid understanding of the business requirements for right-time data. It is also important to understand which weaknesses discovered in the assessment will be exaggerated as you accelerate the enterprise.

The technology assessment consists of documenting what is in place that can be increased in velocity versus what you will need to put in place to accomplish this increase. Extract, transform and load (ETL) tools, database management system (DBMS) characteristics, data quality software and

Process:	Instantaneous	Intermittent	Batch
Time frame:	Subsecond	Several seconds to serveral hours	Overnight or more

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Figure 1: Data Delivery Continuum

ated once or twice a day and mailing lists may be generated once a month, depending on the timing of marketing campaigns. These are right-time deliveries of data that are completely appropriate for their particular processes. Yet, to the employees using them, they may appear to be real-time. In reality, the applications generating these bits of data most likely use a mixture of real-time, sporadic and historic data delivery processes.

If you accept the premise that right-time data delivery is the correct way to go for your enterprise, the challenge is to properly identify the time continuum for all business processes. The first step is for you to perform an honest assessment of your existing

networks, even query and data access tools are included in this assessment.

The determination of the business need may be more difficult. I recommend that you start with a good definition of real-time data delivery to ensure business community understanding. Then you can follow up with these simple questions:

- How important is real-time access to your company? For example, you may want to determine what the ROI will be if you decrease the time to deliver sales performance data.
- What is the optimal time to move this data? Use the time continuum in Figure 1 to map the need to the type of data delivery.

- If you accelerate the business processes, what will be the impact on the business? For example, will it create a competitive advantage, reduce operational costs or improve customer relations?

Once you have answers to these questions, you will be poised to proceed with the intelligence to create the proper environment. Apply this knowledge to your existing architecture to identify which components should be altered, replaced or rebuilt to ensure faster delivery. Prioritize this list using essential business users' input, perform a feasibility study and then begin implementing the solution(s). In pursuing the technology to accomplish these goals, you will find that there is an extensive array of technologies, including ETL, enterprise application integration (EAI), enterprise information integration (EII), business activity monitoring (BAM) and others, to help you create a right-time corporation.

While industry hype and perhaps manufactured need from hard-driving executives may demand "real-time" data delivery, the reality of these business needs is more likely to be a hybrid combination of batch, asynchronous and synchronous delivery mechanisms. Your task is to determine which data delivery mechanisms you need to put in place – and where – to most correctly support the true business requirement of getting the right data to the right person at the right time.

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