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Smart Enterprise Suites and Enterprise Information Portals

By

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Abstract

Both Hummingbird's introduction of "Enterprise Management Information System" (EMIS), and Gartner's introduction of "Smart Enterprise Suite" seem to imply that the day of the portal is done. Or at least that the portal is passé and that the frontier of IT has shifted to a new class of integrated information management applications distinguished by bringing together at least current portal, content management, and collaboration functionality. As Gartner says: "By 2004, smart enterprise suites will emerge as an aggregation of the functionality offered today by portals, team collaboration support and content management (0.8 probability)." This paper analyzes the view that portals will be replaced by smart enterprise suites. It analyzes the risks inherent in smart enterprise suites and develops an alternative prediction about their future in the portal space.

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Both Hummingbird's introduction of "Enterprise Information Management System" (EIMS), and Gartner's recent analysis of "Smart Enterprise Suites" (SES) seem to imply that the day of the portal is done. Or at least that the portal is passé and that the frontier of IT has shifted to a new class of integrated information management applications distinguished by bringing together at least current portal, content management, and collaboration functionality. As Gartner forecasts: "By 2004, smart enterprise suites will emerge as an aggregation of the functionality offered today by portals, team collaboration support and content management (0.8 probability)."

I agree that enterprise systems are evolving into integrated information management systems. Indeed, I may have been among the first to point out this evolving trend in my early papers (from 1997-1999, all available at www.dkms.com) on Distributed Knowledge Management Systems. However, I don't agree with the implication that the day of the portal is over, because *the Enterprise Information Portal ideal*, though not actual portal products themselves, *has always been about integrated enterprise Information management systems*. The present trend toward more comprehensive integration of applications in systems with portal front-ends, rather than moving beyond EIPs, is therefore a movement toward **fulfillment of the EIP vision** as expressed by Shilakes and Tylman in the November, 1998 Merrill Lynch Report that first defined the portal space.

Defining EIPs

Defining the EIP, Shilakes and Tylman said (p. 1):

> *"Enterprise Information Portals are applications that enable companies to unlock internally and externally stored information, and provide users a single gateway to personalized information needed to make informed business decisions." They are: " . . . an amalgamation of software applications that consolidate, manage, analyze and distribute information across and outside of an enterprise (including Business*

Intelligence, Content Management, Data Warehouse & Mart and Data Management applications.)"

They also stated that EIP's (Pp. 10-13) provide "interactivity" – the ability to "'question' and share information on" user desktops; and *integrate* disparate applications including Content Management, Business Intelligence, Data Warehouse/Data Mart, Data Management, and other data external to these applications into a single system. This system can "share, manage and maintain information from one central user interface."

The Shilakes and Tylman definition of EIP is an attempt at a comprehensive vision, emphasizing both its basic functions, and the subsidiary applications that are presently converging to produce EIP products and applications. It emphasizes the idea of the EIP as a gateway to wide-ranging *integrated data, content, and applications* both within and beyond the confines of the enterprise. In emphasizing interactivity and sharing, it touches on two of the most important elements in collaboration.

In other words, the original definition of the EIP characterizes the portal as a gateway, or front-end. It also envisions it as a system integrating middleware and back-end products as necessary to create "the amalgamation of software applications" that constitutes the EIP.

In my own work, I've consistently emphasized the integrated information management aspects of EIPs, *and the nature of ideal EIPs as comprehensive integrated systems* rather than simply front-end gateways. And I've also consistently emphasized the failure of actual EIP products to measure up to the vision of integration laid down by Shilakes and Tylman.

In "Enterprise Information Portals and Enterprise Knowledge Portals", a DKMS Brief defining the EKP (published in March of 1999), I pointed out that EIPs were different from data warehousing systems, because, among other reasons, EIPs seek integration of disparate applications and data sources into a single, integrated application, while data warehousing systems integrate data alone. In that same article, I said that EIPs ought to add a software layer providing for dynamic integration in the face of rapid change in EIP objects, data, and components.

Later, in an industry report, published in November 1999, and also in my book (see below), I present an approach to portal architecture describing the evolution of portal solutions

- ✎ from interface-based integration still isolating applications (called Passive Access to Content or PAC architecture),

✍ to true composite applications characterized by a form of comprehensive integration still not fully implemented (called Portal Application Integration or PAI architecture).

I also segmented the portal space into decision processing, content management, collaborative portals, and combined decision processing/content management portals. I then sketched out pathways of evolution of these types into more integrative portal system types with the endpoint of evolution being the comprehensive knowledge processing portal type called the Enterprise Knowledge Portal.

EIPs and Smart Enterprise Suites

So the idea of integrative enterprise class composite applications with a portal front-end and a diversity of functions is not a new idea. In fact it is the portal ideal and has been from the beginning. The fact that portal systems have yet to realize that ideal doesn't provide a reason for introducing a new term to describe systems that come closer to realizing it than has been the case until now. Smart Enterprise Suites that is, remain EIP systems, even if they offer more wide-ranging functionality than was offered before. And after more than four years of portal progress, they are the products that most closely approach the vision of Shilakes and Tylman.

Even though SESs and EIMSs are EIP systems, they may be distinguished from the general EIP category in at least one important respect. The original EIP vision doesn't specify a single vendor offering. All it requires is that the EIP framework provide for integration of diverse applications and information types. SES, however, is about vendors with expertise in portal frameworks, integrative architecture, and a variety of content management, collaborative, and decision support applications offering an integrative EIP system to the market. Therein lies the difference and the relationship between integrative EIP systems generally, and SESs.

The term "Integrative EIP System" refers to a class of applications including *both* best-of-breed integrative EIP solutions *and* single vendor solutions of the same type. But the terms SES or EIMS refer only to single vendor integrated EIP applications. They are useful because they call attention to the increasingly serious competition between best of-breed and single vendor solutions in the portal space. But they are confusing to the extent that they imply that portal systems no longer continue to evolve to realize the initial portal vision.

On the contrary, however, portal products and user applications do continue to evolve. They still have some way to go to achieve solutions to the "islands of integration" and "islands of automation" problems they were supposed to address. In addition, in spite of product names and book titles suggesting the

contrary, we still need to produce the Enterprise Knowledge Portal (EKP): an EIP-class application that will provide comprehensive support for knowledge production, integration, and management. (See my book, *Enterprise Information Portals and Knowledge Management,* KMCI Press/Butterworth-Heinemann, 2003, for a sustained argument).

Risks in the SES Approach to an EIP Solution

If an SES is nothing but a more advanced, integrative EIP system distinguished by the fact that its component applications have been manufactured by a single vendor, it doesn't follow that SES adoption should be a strategic objective of organizations committed to the most advanced EIP systems. The commitment to an SES/EIP solution involves a number of significant downside risks. Here are some of them.

First, of course, SESs provide effective integration among various applications produced by a single vendor. These applications will not, in general, be best-in-class, however, because no single vendor can produce the best application in every application class represented in the SES. So users of SESs are frequently trading off quality for application integration, at least to some degree. Moreover, even if the trade-off is not immediately significant, because the SES product selected provides a set of quality applications at the time of selection, the likelihood is that, with time, the SES vendor will not be able to maintain the initially excellent quality in each application class. This is to be expected because the burden of keeping up with companies specializing in each individual application area is likely to become increasingly heavy as time goes on. ***Thus, the enterprise that commits to an SES, and with it to a single vendor, commits to a substantial risk that the relative quality of its portal solution will decline with time.***

Second, if the enterprise commits to an SES and experiences a decline in relative quality as a result, its commitment to a single vendor will make it that much more difficult to remedy the situation by replacing applications that are no longer close to best-in-class with new applications. There are two reasons for this: (1) the additional cost of adding a new application in the same class as a native SES application is a barrier to upgrading for quality. And (2) it is likely that the new application cannot be easily integrated with the SES, because the SES vendor will have a negative incentive to provide facilities for easy integration of third-party applications. ***So, the commitment to an SES rather than a "best-of-breed" solution introduces the risk that the organization will not be able to compensate for declining portal quality without incurring excessive expenses.***

Third, the risk that SESs will not allow easy integration of third-party applications is also greater because most SES vendors are currently

producing integrated suites through "one-off" software development efforts providing for integration of their own products through "hard-coding". The alternative approach is to provide a unified view of all applications in an object/component model whose rules provide for continual adjustments to change in the system introduced by the addition of new data, content, and applications. Today that alternative is represented by web services-based integration. While most vendors are committed to supporting web services, at least in principle, SES vendors are unlikely to be among the leaders in providing this form of integration, because providing strong integrative capability based on web services undercuts the rationale of an SES portal strategy relative to a "best-of-breed" strategy.

Fourth, adherents to the SES/EIP strategy risk diversion from the vision of the EIP as an application whose objective is to provide a gateway to all of the contents and applications in the enterprise. This risk comes from the focus of SESs on easy integration of proprietary applications and the incentive of SES vendors to refrain from encouraging integration of third party applications. When an organization commits to an SES, it may find itself immersed in a web of incentives that encourages development of its SES/EIP in the direction of improving its native applications alone. But the EIP vision is about the integration of all content and applications. It does not suggest neglecting the integration of non-suite applications that may be just as necessary to the enterprise, but that will not easily fit under the SES umbrella.

Fifth, there is the risk that widespread commitments to SESs will divert the direction of EIP innovation toward "canned" composite applications, and away from customized solutions leveraging, and accompanied by, a more generalized solution to the islands of automation and islands of integration problems than is provided by the SES. Right now, SESs emphasize content management, collaboration, and portal front-end capabilities. These capabilities cover a broad range of more specific features, but they don't encompass structured data analysis, business intelligence, computer simulation, various scientific applications, and the wide variety of vertical applications necessary to support specialized roles. To create solutions that provide true integration for these applications one must go beyond the native applications in the SES and confront the portal application integration problem once again.

The SES Trade-off and The SES Future

So, the down side risks in committing to SESs are considerable and may involve a real "trade-off" between acquiring a basic set of integrated portal, content management and collaborative applications, and acquiring a more generalized capability to integrate applications of every kind into a portal framework. I say *may* involve such a trade-off because SES vendors are not uniform in the generalized integrative capability they provide. Some, such as IBM, may field a

strong SES offering along with strong integrative capabilities. Others, such as Hummingbird and Hyperwave offer impressive suite components providing much greater integration among "native" applications than they facilitate with third-party applications. Still others, such as Plumtree, bet on successfully developing their integration capabilities, while also upgrading their "core" applications in content management and collaboration.

Unless SESs offer strong generalized integrative capabilities, going beyond the integration of native SES applications into the portal system, they will not fulfill the vision of making everything necessary for one's job role available through the portal. On the other hand, if portal vendors do offer strong generalized capabilities, then why do users need the SES? Why not simply buy a portal framework and "best-of-breed" applications?

To the degree that creating composite applications within a portal framework is easy, the attraction of the SES declines. This suggests that the current appearance of the SES may be a temporary trend explainable by the fact that portal vendors have not yet solved the islands of automation and integration problems. When they solve them and if they do so before SESs gain a strong foothold, the hard choice between an SES/EIP and "best-of-breed" portal strategy, will become much easier, and the incipient SES trend may be quickly reversed.