

HOSPITALITY DIVISION'S SECURE ONLINE ACCESS PROJECT

2005 COMPUTERWORLD HONORS CASE STUDY

BUSINESS

THE CREATION OF A SECURE, SINGLE POINT OF ENTRY INTO CRITICAL BUSINESS SYSTEMS AND INFORMATION FOR HQ STAFF, BUSINESS PARTNERS AND 6500 FRANCHISEES WORLD WIDE ALLOWS DELEGATION OF CONTROL TO WHERE IT IS MOST NEEDED, THE LEVEL OF THE INDIVIDUAL. [20055341]



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SUMMARY

The creation of a secure, single point of entry into our critical business systems and information for HQ staff, business partners and 6500 franchisees world wide; a system that truly allows us to delegate control to where it is most needed, at the level of the individual.

APPLICATION

During the last 2 years Cendant Hotel Group (CHG) has made a concerted effort to replace traditional, paper-based franchisee reference materials with virtual documents on brand-specific, Web portals, to put more applications under the brand portal umbrella, to add new applications for our franchisees, and to increase the capabilities of our existing applications. While they represent a huge advancement for Cendant Hotel Group and our franchisees, these enhancements and innovations -- along with those applications added during the last 2 years and those planned for 2005 -- would have increased the complexity of our environment and taxed the existing, siloed security infrastructure. Absent a new approach, each franchisee would have been required to manage as many as 17 different sets of IDs and passwords per person and resulted in a five-fold increase in support costs for CHG.

We were confronting a system in which each application had its own set of security administration and user IDs & passwords. Those costs associated with the increasing number of applications would have continued to grow at an exponential rate over the next several years due to the lack of delegated administration and self-service functionality. Also, security audits in 2002 and 2003 had discovered multiple issues requiring attention.

We realized that in order to remain competitive and to attract the best franchisees in the future, we needed to offer more than our competition in the area of technology. We needed to create a true, single source of user administration, authentication and authorization that would enable us to provide single-sign-on (SSO) to all of our applications. We needed a true "gate keeper". That is why we named the project Cerberus after the mythical three-headed dog that guards the gates to the underworld. The system we were building would protect our corporate systems just as ferociously.

Project Cerberus will allow us to take the anticipated five-fold increase in support and infrastructure costs over the next 4 years (2005 – 2008) and turn it into a 25% decrease over the actual costs of 2003 relative to the projected growth in new services.

Furthermore, Cerberus will be the security cornerstone for CHG's future application architecture and will allow us to provide secure, personalized, services to individuals within Franchisee organizations, Cendant headquarters, and business partners and to cost-effectively manage those services.

In Summary, Project Cerberus is providing CHG with:

1. Centralized authentication, authorization and auditing to enable single sign-on (SSO) and secure access control across enterprise resources.
2. Industrial strength Identity Management for users and groups, with a scalable and reliable directory.
3. Delegated account administration employing a security related work-flow engine that is the enabler for self-service transactions.
4. Full Password Policy Enforcement and Management with provisioning to third-party and corporate systems.
5. SAML (Security Assertion Markup Language) support for business partner integration to ensure that all of our transmitted information is secure and to enable SSO capabilities for Web Services

BENEFITS

Since we are still in the process of rolling out this application to our franchisees, it is difficult to gage the eventual impact that all of these changes will actually have. I can say that since the early presentations at our annual brand conferences have met with resounding approvals and even, on one occasion, a standing ovation, we expect these changes to be well received by our franchisee community as a whole.

This implementation has already saved us several hundred thousand dollars in development costs. We've already successfully rolled out 3 applications and 2 partner-integrations within this new security architecture. These applications have been fully integrated into our new security infrastructure, thereby completely avoiding the costs associated with having to develop a separate security layer for each of those 5 applications.

We have yet to see the full impact on the help desk and call center but again we expect project Cerberus to provide significant cost savings over the next few years.

We expect the changes that occur as a result of this project to be significant and wide-reaching. We foresee a future where franchisees help themselves as needed to the services and information that they need to be successful in their business instead of waiting on hold while an overworked help desk tries to grant access to one of several new applications. We've already seen the predicted time-to-market and cost of development drastically reduced from previous years allowing us to do more with less - which is increasingly the only way to do more.

This project will indeed fundamentally change the everyday work life of our franchisees, headquarters staff, and help desk administrators. It allows everyone to go to a single place for all necessary information and critical business applications. It provides for account self-management so the users never need to be dependant on the help desk for simple tasks like resetting a password.

This project provides us with a two-fold opportunity. First and foremost, it keeps our franchisees and partners happy and more productive and therefore more profitable. Secondly, and perhaps more importantly, it seriously differentiates us from our competitors. We are the first hotel franchisor to provide this level of SSO and user management sophistication coupled with this advanced level of business systems. This differentiation will allow us to continue to capture more and better future franchisees and thereby retain and grow our position as the largest hotel franchisor in the world.

While all of the above may not define any new challenges to society as a whole, project Cerberus does fundamentally challenge the way in which our franchisees and headquarters staff do their jobs. It permanently alters the paradigms under which they currently conduct business and places the responsibility for using the systems we provide squarely on their shoulders. This is the only fundamental downside to being given more control over what you do and affect; with increased capabilities comes increased complexity and an increased reliance on one's self instead of others.

IMPORTANCE

Information Technology was central to the project itself. The solution we are deploying is totally technology based and was a requirement due to changes imposed by other technology. If we did not have multiple business systems that required security and identity management, we would not have had to put in place a security infrastructure to support it. In other words, technology was both the cause and the effect.

The technology employed was particularly important because it was a way of automating and delegating processes that had previously been handled in a purely manual fashion. It was, in effect, the only possible way of implementing necessary changes.

The implementation of the technology used will directly lead to new ways of communicating and processing information for both our franchisees as well as our corporate staff.

The core technology used, Oblix COREid, is relatively new in the industry. It addresses the relatively recent need to be able to manage, support, administer, and provide SSO to a large number of people across a large number of heterogeneous applications. Additionally this particular implementation is radical regarding the level of customization and delegation we are providing to our end users. These customizations range from providing 3 different graphical user interfaces (GUIs) for account administration, franchisee, help desk and HQ, to versions of these tools in Hindi and Gujarati to better support our large population of Asian-American Franchisees. This level of customization resulted from the definition phase of this project when we realized that we would have to develop new technology to satisfy the stated requirements. The one drawback to this approach was that we were truly in terra incognita with COREid and have had to develop solutions that are new even to Oblix.

ORIGINALITY

This project is unique in many respects. As you've read above, we had to develop brand-new approaches to account administration as well as supporting multiple languages not supported by the product vendor. These are things that, to my knowledge, have not been attempted before.

Additionally, the scope of the applications protected and managed is truly exceptional. To simply say that we

support heterogeneous environments cannot begin to tell the tale of what we are implementing. We are dealing with .Net applications running on the Windows operating system; Java applications running on BEA Weblogic 6.5, 8.1 and Linux. We are supporting or utilizing, Microsoft ADAM, Sun LDAP, Oracle and DB2. We are integrating third-party applications from Informatica and other third-party vendors as well as providing SSO to custom third-party Web sites, many of which are utilizing TIBO as a middleware backbone. To achieve this, we are accessing applications in Colorado, Arizona, Florida and New Jersey as well as a multitude of third-party apps at other locations around the country.

SUCCESS

To date, we can say that we've achieved all of the goals we intended to achieve at this point. These include significant cost savings in application development, the elimination of many security vulnerabilities, the ability to provide some self-administration including lost password retrieval, and SSO for some of our applications. While we've already achieved many of the project's milestones, we are not yet fully operational. That goal will be achieved in just a few weeks from the time of this case study.

For this first incarnation of the security infrastructure we expect about 30,000 individuals and over 6,000 franchisee locations to directly benefit from our work. We then expect to leverage and expand this infrastructure to consumers using our brand Web sites to book stays at our hotels some time in the near future. At that point we expect to benefit as many as 9 million consumers.

We predict that it will take about 6 to 9 months until this technology is fully embraced by all of our franchisees, in part because we are doing a phased roll-out by brand and also because there is always some resistance to change in such a diverse group.

DIFFICULTY

Technologically speaking the greatest challenges have occurred during the last 20% of this project. While Cerberus remained within the bounds of those well-documented tasks that had been done by previous Oblix customers, there were relatively few problems to contend with and certainly none that are not commonly experienced by other projects of this size and level of sophistication. It was during the last phases, when we began to truly customize the product, that we encountered problems. Because of the relatively few number of true Oblix experts, it was extremely difficult to find resources and expertise to get us past many of the user interface customization issues we faced. Even though we had several extremely well-qualified developers who had gone through Oblix certification, it was still necessary to bring in outside resources to get us past many hurdles. On several occasions it was necessary to engage the actual Oblix engineers and developers that had created COREid .

Project Cerberus was a project long in the making. It took 2 years to get approval and funding. Management questioned costs, particularly the magnitude of items seemingly as simple as resetting a password and managing user accounts. Cost frequently becomes a matter of contention with projects that require a large effort in hardware and back-end systems but have relatively little front-end, or presentation layer, presence. The second major challenge was raised by our internal Hotel Information Technology leadership, which noted the company already owned two applications from competing manufacturers that appeared usable for this purpose. We were asked to justify purchasing yet another application and to negotiate a better price. This took 2 years to achieve.