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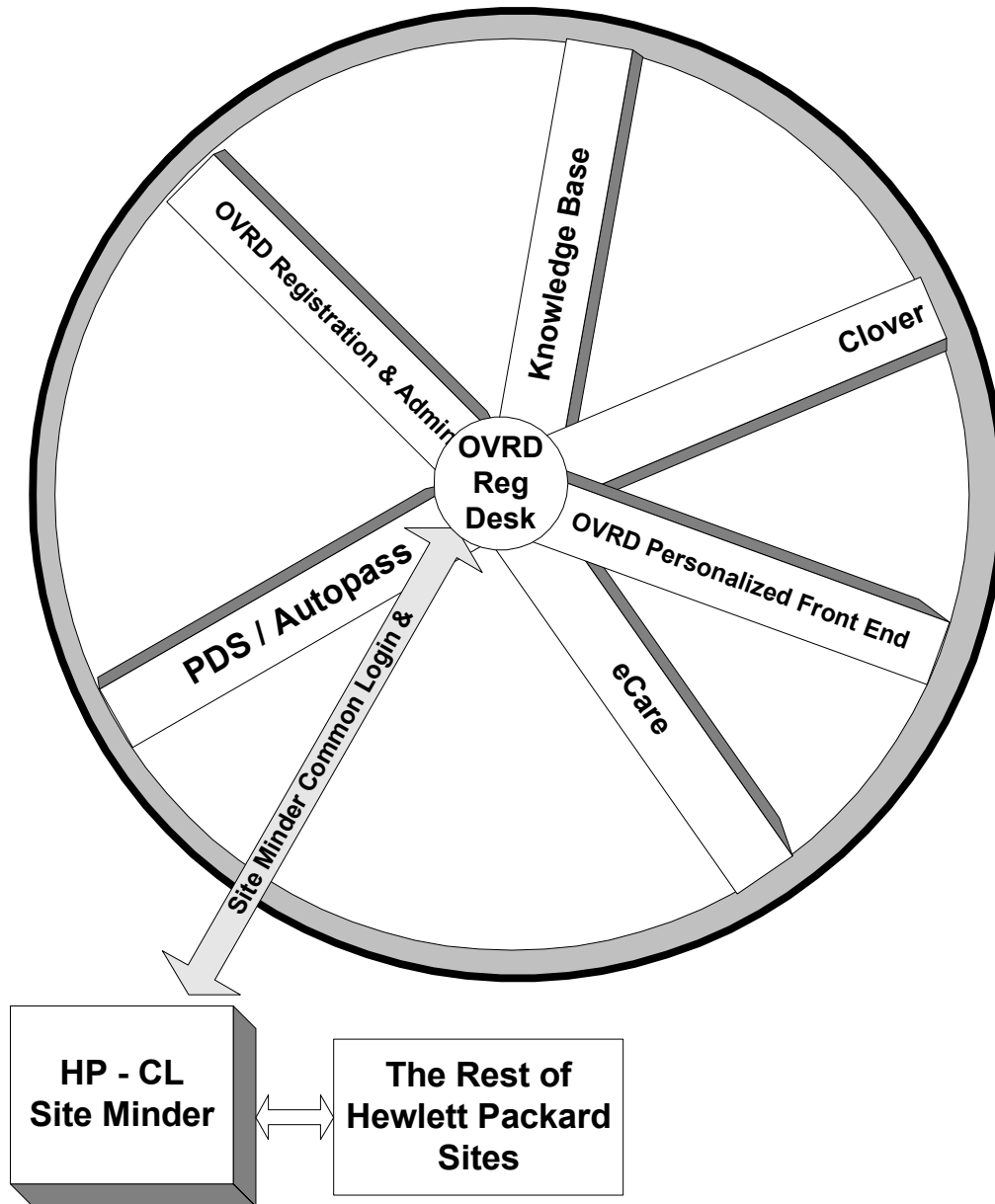# Proposal for OpenView Registration Desk (Hewlett Packard) abbreviated as (OVRD)

The purpose of this document is to outline PyBiz's proposal for the OVRD project. It is based on the original document as received from Anthony Valandingham.

PyBiz resources have substantial experience in the problem space being addressed by this project including a very similar system called ESN (Electronic Solutions.Now) which was deployed to H.P. Enterprise accounts during 1998, 1999. We have deployed the next two generations of related technology since that time.

Much of the value PyBiz resources bring to this project is their embedded knowledge not only of the problem domain but how this Domain maps in to HP

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Open View Registration Desk Hub & Spoke Portal View

OVRD represents a next generation secure enterprise portal.   It will use a hub and spoke model as shown above. It will have the following characteristics :
- Substantive functionality is provided by the spokes (child sites)
- The hub is responsible for collecting and maintaining user profile data not supplied by the HP CL
  - Includes a single point of user registration and data gathering via forms.

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- All user profile data is owned by the hub and shared with the spokes as necessary.
- The hub is also responsible for authentication in conjunction with HP CL.
- The hub is responsible for mantaining, enforcing and sharing authorization data with spoke sites.
- An unlimited number of spokes can be added as dictated by customer demands.
- Two Spokes "OVRD Personalized front end" and "OVRD Admin & Registration" are actually part of the registration desk but architecturally connected as spokes.
- The hub design is such that spokes can be integrated with the least possible amount of changes. This low intrusive architecture is based on PyBiz's Loosely coupled adaptive architecture approach.
- This architecture allows the spoke applications to be built in any popular web development tool/environment.

The SSO eCRM team has already adequately stated the business case for this implementation so we will not include that material in this proposal.

Design & Investigation

Estimate

- **$56,000 - 10 Man Weeks** (4 each for two people + 1 week investigation + 1 week writing)
- **NOTE:** The above quote is an estimate. The actual figure will be based on time and materials but will not exceed 100K.
- We find that the best approach to running an architecture session is to have one architect think and interact while another documents. This approach tends to best utilize the time of the people attending the workshops.
- It is assumed that the work shops will not occupy more than 3 days a week. The other two days will be used to formalize the notes into the architectural design.
- Travel time outside of Silicon valley and related expense are not included.
- We assume an admin resource will be made available to coordinate meetings with other HP team members, set up conference calls, etc.
- We will need one week after the formal workshop ends to finalize and polish the documentation.
- In some instances it will require non trivial resources supplied by H.P. to provide, review and approve material supplied.
- Assume that HP will provide a tech writer resource for final editing and assembly work.
- Depending on the final ultimate amount of illustrative material needed for the end user facing material this activity could grow.
- Some of these guides may have to be completed concurrent with the implementation phase.
- NOTE: The final architecture of the project including the tools to be utilized (like Xdisect or some other solution) will be decided before the end of this phase. Hence some of the assumptions and the cost might change
- NOTE: The amount of effort to integrate the initial OVRD spoke sites (clover, eCare, etc) will be estimated and defined in the first 2 weeks

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once the requirements and the architectures of these sites becomes clear
- NOTE: Localization of registration content will be investigated and scoped out during this phase (since it seems to be an emerging requirement). PyBiz will advise HP Team about the cost of this activity & the additional effort required for this feature.

Deliverables

Requirements Definition document

- Capturing business rules and gaining agreement on those that have been captured.
  - Document data privacy and sharing rules.
- Data standards
- Preliminary Infrastructure diagram
- Technology (database/User Interface) comparison matrix
- Customer experience logic flowchart
- Registration process design/publication logic flowchart
- Detailed functionality
- Integrate able applications
- Logical database schema with integration points for integrate able apps
- Customer Experience Logic Flow chart
- Registration process design, publication and product flow chart.
  - Use case documentation for all major user activities/scenarios.
  - Use case model for forms designer.
  - Visual HTML GUI walk through for major components.
  - Detailed message flow and structures for HP CL use.
- Detailed notes gathered from various meetings.

Design Specification document

- Infrastructure
- Technology selection
- Logic and functional flowcharts
- Logical and functional page templates (look and feel)
- Database Schema
- Linkage with integrated applications
- Shared data functionality
- Detailed architectural model & Design for portal and major connections.
  - Infrastructure design document for always-on infrastructure.
  - Detailed recomended hardware implementation architecture.
  - Hardware signoff with deployment resources.
- Technology (database/User Interface) comparison matrix
- Architectural walk through and messaging for the forms designer persisting of data.
  - Recomended event delivery architecture for profile data exchange from portal to spokes.
- Recomended architecture for transfer of user's common login and session to spoke sites.

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- Propose a complete test to production promotion strategy. Including promotion steps.
- Recommend a detailed timeline for various code freeze and test cycles.

Detailed Project Development/Implementation Plan

- Timeline (by hp)
- Resource allocation (by hp)
- Man-hours (hp only) + vendor estimates.
- Dependencies
- Identification of primary technical risk factors including recommendations to mitigate these factors.

Application integration guide document

- Task/Resource breakdown structure
- Project integration plan (includes all items from Development/Implementation Plan)
- Primary milestones driven bottom up.
- External application integration strategy for each of Clover, eCare, PDS/Autopass
- HP resource allocation
- Vendor resources allocation covered by contract.

HP-CL Implementation/Integration plan document

- Task/Resource breakdown structure
- Project Plan (includes all items from Development/Implementation Plan)
- Primary milestones and responsibility driven bottom up.
- HP CL milestone are responsibility of (HP).
- Integration strategy & design for HP CL work.
- Messaging and event flow chart for HP-CL Integration

QA Testing, Operations, and Support plan document

- Support team definition (by HP)
- Who is responsible for operations/support activities (by HP)

Stakeholder/Content owner Training Plan

- How common login works (by HP)
- How reception desk works
- How application integration works
- Step-by-step instructions for creating and publishing registration forms
- Data mining and reporting abilities

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Phase #2 - Initial Implementation

Estimate

- **$170,000 USD with 5 to 6 elapsed weeks**
- Includes Primary architect and developers.
- Includes XDisect Development and production run time license.   This means a typical additional RDBMS license will not be needed.
- Includes CEF Development and production run time license.
- Includes 2 weeks of modifications and bug fix time, which starts at end of 6th week.
- Includes one week training for production deployment team.
- Includes one year of core product release upgrades.
- Any SiteMinder license fees are out of scope.
- HP will need to provide us early access to hardware for development testing which is very similar to production deployment environment.
- Early access to actual production hardware will be required to run tests.
- Subsequent support and enhancements will be provided at prevailing consulting rates or can be negotiated in a separate fixed price contract.
- This estimate presumes that PyBiz resources performed the phase I analysis and Design. If other resources do this phase then we will have to re-estimate this work based on their skill level and knowledge of the problem domain.
- We expect that HP will provide a publishable reference to our other prospective customers
- Database migration estimates will be need to be finalized upon exit from requitements & design phase.   This will require non trivial HP resources and may also require additional vendor support at extra cost.

When building ESN and similar E-Speak components we (HP) spent the better part of 3 million dollars each time to deploy similar functionality.   It is only due to our experience in this space and the strength of our products which were designed specifically to solve this kind of problem that we can deliver this functionality for this low amount.
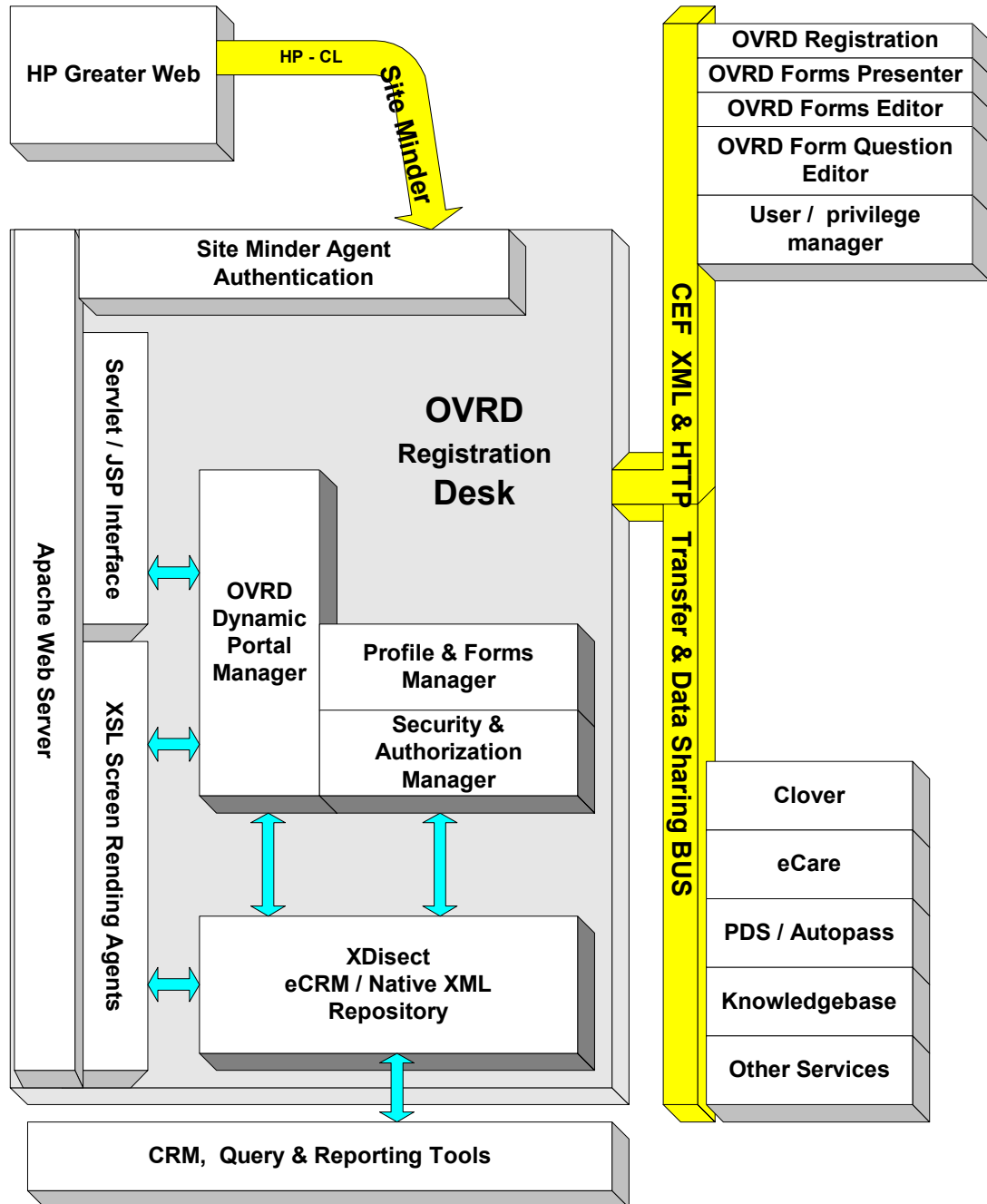
The requirements of this project appear to closely match the functionality provided by PyBiz products XDisect and CEF.

As far as possible the functionality will be delivered from our existing products. Where new functionality is needed our preferred strategy will be to add it to our core product infrastructure.   Only if a specific piece of functionality is incompatible with our product strategy will it be made an HP specific extension. This approach ensures that HP gets an out of the box solution, which PyBiz is responsible to maintain on an ongoing basis with minimum overhead to HP

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OVRD High Level Architecture

Deliverables
- Receive secure transfers from HP.com's CL infrastructure (SiteMinder)

- Receive basic profile data during transfer process from SiteMinder
  - This includes event driven, on transfer data
  - This includes periodic transfer of batch data.

- Provide secure transfer architecture from OVRD to spoke sites
  - Includes transparent authentication to spokes such as CLOVER & eCARE.
  - Includes authorization check on user and session transfer.
  - Includes XML API to allow spoke to request additional authorization information about the user.
  - This will allow individual authorization for users of each spoke application.
  - NOTE: The common login integration will happen only from the HP.com- CL to OVRD. The other participating sites within openview will be connected to OVRD via a simpler protocol and mechanism, keeping in mind the vision that eventually these sites might move to the Common Login architecture

- Provide selective sharing of OVRD user profile data to the spoke sites
  - This includes distribution of change events via an open XML / HTTP interface/messages to the spoke applications.
  - Each spoke application will have to build an adapter to convert the standard XML format into something they can use in their local repository.

- Create a Log of Vistors to the site and which spoke sites they have visited.

- Provide an XML-based usage & Log infrastructure, so that spoke sites can report significant usage events to the hub.

- Integration with one primary spoke site (could be eCare, Clover or Autopass). HP Team can decide on this one

- Integration architecture and API for adding additional spoke sites, etc. (See Question Below). Assume CEF

- User Registration Sub System
  - When a user first accesses the system by transfering from HP CL , a set of forms will be chosen that contain mandatory registration fields. These forms will be presented to the user and then must be filled out adequately before gaining access to the OVRD spoke application.
  - When a user gains access to a new service, OVRD will determine which forms/fields are applicable and present them to the user to be filled out.

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OVRD Registration
OVRD Forms Presenter
OVRD Forms Editor
OVRD Form Question Editor
User / privilege manager

HP Greater Web

HP - CL

Site Minder

Site Minder Agent
Authentication

Servlet / JSP Interface

Apache Web Server

XSL Screen Rending Agents

OVRD

Registration
Desk

OVRD
Dynamic
Portal
Manager

Profile & Forms
Manager

Security &
Authorization
Manager

XDisect
eCRM / Native XML
Repository

CEF XML & HTTP Transfer & Data Sharing BUS

Clover

eCare

PDS / Autopass

Knowledgebase

Other Services

CRM, Query & Reporting Tools

-
- Forms Presentation Manger -
  - Ability to present a list of forms to the end user that he/she has currently filled and allow them to modify the forms.   Note.: May also want to let the user look at a macro form which contains all the fields from all the forms they have already filled in.
  - Present forms to the end user.
  - Ability to render a coherent form based on the field specifications associated with that form.
  - Support Text, Select List, Multi Select List and Radio button type attributes.

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- Enforce mandatory and non mandatory attributes
- Fill in some pre-existing fields with information from end user.
- Save the information in the OVRD portal repository
- Send events to spoke applications with new data content.

- Forms publisher – Allows the content adminstrator to create a customized form based on the library of pre-defined questions
  - Secure access to create and modify forms.
  - Ability to pick questions from a pre-defined list.
  - Ability to name the form.
  - Ability to test the form that results from the picked questions.
  - Ability to define which spoke systems should receive data change events when this form is modifid or filled out by a user.
    - Note. It may be more effective to define the data attributes needed by each spoke rather than by form. That way if any attribute of interest changes , even if it is on a different form, the interested parties can be notified.
  - Ability to see the list of available questions.
  - Ability to select a field to include on the form and to specify a read only or changeable attribute.
  - Ability to specify rules/conditions under which the form should be presented to the end user.   We need some more analysis to understand what the trigger conditions will be during this process. Note.: Since we are dynamically displaying/assembling forms anyway based on snippets it may make sense to allow the system to compose the form based on what information is needed according to current user privliges and preferences.
  - Ability to delete forms which are owned by the current user.
  - Security restricted to orginal form owner. Can be overridden by System Admin.
  - A single field may appear on multiple forms. Once it has been supplied by the user it will automatically be filled in on any form that includes it in the future.

- Library Questions Manager
  - Ability to create new questions.
  - Ability to change legal values for questions.
  - Ability to see which forms depend on a question.
  - Ability to specify field type such as Pick List, Multi Select Pick List, Text Area, Text Field, Radio Box.   Also collect basic sizing and option list parameters as approapriate for the field select list.
  - Ability to specify which profile attributes the answers from a specific field type map to.
  - Ability to specify labels for the field.
  - Ability to specify mandatory and non mandatory fields for the field
  - Ability to specify the relative priority for a given field as compared to other fields.
  - Ability to dynamically expand the OVRD profiles to include new attributes for users.

- A system admin guide for provided components.
- Install and test on production hardware.

- Security Admin Sub System
  - Ability to create user groups.

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- Ability to assign specific privileges to user groups.
- Ability to assign specific users to user groups.
- Ability of Spoke systems to determine if a given privilege is available for a given user.   All access is filtered at the unique privilege level.

- Data Sharing between ORVD Hub and Spokes
  - Support for Batch level XML feeds to spoke based systems just in case they get out of synch with central repository.
  - Support for spoke applications to directly query the OVRD repository on demand rather than maintain their own local repository.
- Operation guide
- Technical design documentation
- Database schema
- Training Material

Key Benefits of PyBiz Solution
- Open Architecture and standards based XML protocol for data-sharing and events makes it easy to add new sites.
- Our strong experience specifying, building and deploying very similar sites in HP will help avoid many subtle problems.
- Easy extension in to the larger eCRM space.
- Out of the box solution with minimal maintainance requirements
- Easy ability to add new user profile data without requiring schema redesign.
- Incremental approach to development ensures that sponsors see quick ROI and also can get ROI on an ongoing basis. As opposed to having a large investment up front before seeing any returns
- Extensive search and matching capabilities inherited from Xdisect

Stated Assertions
- It is critical that the correct data sharing and site to site transfer architecture be chosen for this round so that it will be an incremental extension to add new sites.
- The HP-CL initiative will provide only authentication data and will not furnish authorization data or services .
- This solution will be Xdisect based.
  - A run time license for Xdisect will be included in the proposal.
  - No additional databases such as Oracle will be required.
- Any fees associated with using SiteMinder are outside the scope of this proposal.
- If data is likely to be used by more than one spoke then it should be owned and maintained by the Hub.
- The OVRD portal web server infrastructure will be Apache based and include support for Java servlets.
  - Additional plug in components may be added to the web server.
  - NOTE: If the OVRD team has an EJB or J2EE based application server framework, this can easily be used as the front-end for the entire system in this architecture

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Out of Scope Deliverables

These are items which our past experience indicates may be
needed but were not explicitly mentioned in the RFQ or subsequent
conversations.
Unless otherwise notified PyBiz will consider these as out of scope.

- Personalized launch screen that shows the user currently available
  services. Is there any form of launch screen needed in this release
  and if so how dynamic should it be.
- Personalized user experience based on currently active user profile and
  available privileges.
- Load Balancing and DRP fail over.

Open Questions

- It is going to be easier to politically defend the use of Site Minder for
  secure transfer from the Portal to the spoke sites because that is what
  the rest of HP is using. It means however that OVRD must have a
  SiteMinder server infrastructure in place to execute the transfer. It
  also means that all hubs must have the SiteMinder agents installed.
  There are alternatives that would be cheaper but it is unclear whether
  it is worth the political overhead of pursuing them.   In any case Site
  Minder will solve only a portion of the problem and will have to be
  augmented with some CEF capabilities.
- Should consider how information can be shared with the ESN team
  which has probably already signed up a large number of the users who
  will be using the OVRD portal.
- Rather than implement the timer based synchronization between
  HP.com CL and OVRD we would recommend an intermediate step of
  on-change propogation of data from HP.com CL to OVRD. However we
  are willing to do it as the customer desires.
- How will privileges / authorization be assigned to users.
- Is there a PIN/token based self-registration approach which allows end
  users to gain membership into user groups. E.g. an account executive
  gets promoted to regional sales manager and would now like to
  automatically upgrade his access and privileges to the Sales Manager
  user group (which has different visibility).
- Is there need to inherit fields from a company level. Is there need to
  model a company relationship by user.   E.g. if a purchasing manager
  works for Boeing and Boeing already has an active purchase order with
  HP, then he/she should have visibility to this information ?.   In ESN
  we made this a company level attribute. Since the user worked for that
  company we were able to give access to the the Purchase agreement
  automatically. Of course this would be governed by the privileges of
  the user within Boeing and or approved by Boeing.

SCENARIO #1 - User attempts to access secure site from greater HP Web

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**SCENARIO #2 - User accesses the OVRD Portal and
receives personalized menu page**

Phase 3 Deliverables

Future Advanced ECRM functions
- Integrate other spokes into OVRD hub
- Integrate OVRD with other partners besides HP.com CL (e.g sun web, etc)
- Train HP resources to perform future integration of new applications into the OVRD hub
- Personalized front page similar to "My Yahoo"
    - Based on active user preferences
    - Based on user's current authorization privileges
    - Ability to target content to a user based on past visit and preference data.
- Event Usage / Profile query tools
    - Track visits to the OVRD hub.
    - Track visits to OVRD spokes applications.
    - Track visits to major areas inside of OVRD spoke applications. May require effort by individual application teams.
    - Track visits to product groups inside of OVRD spoke applications. May require by individual application teams.
- Touch point aggregation for global customer visibility.
    - Recognize users returning to the site.
- Automatically report usage information using a high level XML HTTP API by providing web server plugins to each of the spoke applications

Open Questions
- We need a better definition of the evolution in to a total eCRM solution.
- What about protected areas. That is areas that are so sensitive they need special approval before the user can be granted access.

Reference Documents
- Xdisect main features & Benefits page - http://www.pybiz.com/main_home.html
- CEF - Collaborative E-Business Framework - http://www.pybiz.com/products/cef/index.html
- PyBiz Team History - http://www.pybiz.com/company/history.html
- XDisect Portal Scenario - http://www.pybiz.com/products/cef/scenarios/cef_nmm_scenarios.pdf