Programmatically Profiling Users, Personalizing UI, And Targeting Content To Audiences

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DEV15: Programmatically Profiling Users, Personalizing UI, And Targeting Content To Audiences

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Agenda

- Intro to Personalization
- Features overview
- Demo scenarios
  - Using Profiles and Audiences ("roles")
  - Using Social Networking
  - Using Server Discovery
  - Using Rich People Information
- Key take-aways

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What Is Personalization?

- Providing "me" centered user experience of the resources (Data, documents, and people) in your company
  - Remember user preferences in your applications
  - Show HR News based on my org and business role
  - Show "My Customers", instead of a customer list
  - Give insight based on social networks – what are people you know doing
- Seeing the world with "me" colored goggles

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Features Overview

- Profile Store
  - Used to store user specific information
  - Office Server will import data from most data-sources incl. directories, web services,and data-bases
- Targeting
  - Used to do role based targeting
  - Optimized for performance for testing role membership and defining roles (audiences)
- "Me" roll-up
  - Used to pivot to other objects related to a person
  - Eg. People they know, DLs,and Sites they belong to
- Server Discovery
  - Used in Windows client apps to show personalized info from the server

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Using Profiles And Audiences

- Let's build a personalized portal
- Spec
    - Personalized "HR News"
    - HR "Tasks" (eg. Fill in review, Open Enrollment)

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Personalized Portal

- Task 1: Personalized "HR News"
  - Use Content Query web part
- Task 2: Code "role" based Actions web part
  - Get user's roles, test against role metadata in the actions table

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Demo

Audiences and Targeting

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Personalized Portal

Using Audiences to Target List Items

```
AudienceLoader audienceLoader = AudienceLoader.GetAudienceLoader();
foreach (SPListItem listItem in list.Items)
{
  // get roles the list item is targeted to
  string audienceFieldValue = (string)listItem[k_AudienceColumn];

  // quickly check if the user belongs to any of those roles
  if (AudienceManager.IsCurrentUserInAudienceOf(audienceLoader,
                                                audienceFieldValue,
                                                false))
          {
                // is a member
          }
          else
          {
                // not a member
          }
        }
```

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Best Practices and Further work

- Use Profile store to import data from business systems
- Use Audience OM to get user roles (Either audiences, DLs or sharepoint groups)

- Use part-to-part connections to transfer user identity or user properties
- Create links to other systems using BDC web parts, filtered by user

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Using Social Networking

- Social Networking exposed in SharePoint through "Colleagues"
- Users can manage their own Colleagues; SharePoint can suggest new colleagues

- Let's build a "Workgroup Activity Tracker" web part
- Spec
  - Show which of my colleagues have been viewing a Team Site

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Workgroup Tracker

- Task 1
  - Use workgroup view of Colleagues
  - Join with activity data to show reads

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Demo

Using the Colleagues object model

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Workgroup Tracker

Joining colleagues with activity data to show reads

```
UserProfile userProfile = getCurrentUserProfile();
Colleague[] colleagueCollection = userProfile.Colleagues.GetItems();
if (colleagueCollection.Length > 0)
{
    DataTable dt = web.GetUsageData(SPUsageReportType.user,
                                    SPUsagePeriodType.lastMonth);
    // get all of the user's colleagues
    foreach (Colleague colleague in colleagueCollection)
    {
        // iterate through the data collection.
        foreach (DataRow dr in dt_Usage.Rows)
        {
            if (dr["User"].ToString().ToLower() ==
                    userProfile[PropertyConstants.AccountName].ToString().ToLower())
            {
                // render to HTML
            }
        }
    }
}
```

Best Practices and Further Work

- Use Colleagues list for people a user knows
- Extend it to do "6-degrees of separation"
- Honour users' privacy settings

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Using Rich People Information

- Modern applications show rich information about a person, wherever referenced
  - Picture
  - Free/Busy
  - Chat/Call
  - MySite link
- Spec
  - Show picture next to name
  - Show IM "gumdrop" on a web page
  - Make name clickable to User's profile

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Rich Person Info

- Task 1
  - Show user's picture next to name
- Task 2
  - Convert name into Link to Profile
- Task 3
  - Embed Jscript for IM "gumdrop"

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Rich Person Info

```
string.Format (
    "<span>" +
    "<img name=\"imnmark\" onload=\"IMNRC('{0}');\"" +
    "ShowOfflinePawn=\"1\"" +
    "src=\"/_layouts/images/imnhdr.gif\"" +
    "style=\"height:12px;width:12px;border-width:0px;\" />"
    +
    "</span>" +
    "<a href=\"{1}\">{2}</a>",
    user[PropertyConstants.SipAddress].Value,
    user.PublicUrl.AbsoluteUri,
    user[PropertyConstants.PreferredName].Value);
```

Demo

Adding Rich Person Info

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Using Server Discovery

- Let's set up Outlook to find sites which are relevant to me
- Spec
  - Create an Add-in that will show relationships to each site the user belongs to
- Design
  - Create add-in
  - Call Office Server Discovery web service
  - Find each doc lib in the site

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Demo

Using Server Discovery

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Using the Published Links Service

```
http://server/_vti_bin/publishedlinksservice.asmx


        [WebMethod]
        public ServerLink[] GetLinks()
        public class ServerLink
        {
                public string Title;
                public string Url;
                public long LinkType; // see ServerLinkTypes
                public bool IsMember;                    // is the user a member of this site
                public bool IsPublished;                 // is this link publish/target to the user
        }
        public class ServerLinkTypes
        {
                public const long SharePointSite          = 0x000001;
                public const long PersonalSite            = 0x000002;
                public const long PortalSite              = 0x000004;
                public const long ProjectWorkspace        = 0x000008;
                public const long BigDocumentRepository   = 0x00000001000000;
                public const long DocumentLibrary         = 0x00000002000000;
                public const long DataConnectionLibrary   = 0x00000004000000;
                public const long SlideLibrary            = 0x00000008000000;
                public const long None                    = 0;
                public const long ProfileSite             = 0x0100000000000000;
                public const long MySiteDocumentLibrary     = 0x0200000000000000;
                public const long MySiteDocumentLibrarySync = 0x0400000000000000;
        }
```

Best Practice and Further Work

- Extend to auto-synchronize with SharePoint Offline folders

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Key Take-Aways

- Speed up personalization by leveraging assets in Office Server
  - Profiles, Privacy, Targeting, Social Network, Rollups, Server discovery, MySite, Change log
- Role based targeting is the first step
  - Preferences of user, determined by org. hierarchy or business role, using business data
- Show Rich and Relevant information about a Person
  - Show picture, IM/Call menu, Free/Busy, MySite profile
- Going beyond targeting of content
  - New and exciting scenarios are possible with social networks, people search, rollup

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Questions?

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