Access to Person Related Data in the University Directory

The University Directory is part of an initiative to provide a comprehensive framework for network based applications to do enterprise based authorization, authentication, and searches. It contains person information about employees, students, and affiliates as well as certain other information that is not person related. The person data is either updated real-time from source systems (e.g. email address) or is populated from data feeds from source systems (PHR, SIS, Affiliates). In a few cases, the directory itself is the primary source for data elements. This document addresses how person related data in the Directory can be accessed and by whom.

Who is included in the Directory?
The Directory includes students, employees, and affiliates associated with UMCP. Effective July 2004, the Directory also includes employees associated with USMO, UMBI, UMCES, and UMES.

- Current students (College Park, excluding Vet Med students) - Students are in the Directory while they are active and for a year (plus a few weeks) beyond their last registration semester. For example, if a student was last registered during the Fall 2002 semester, his record will remain in the directory feed until shortly after the start of the Fall 2003 semester. (For the Directory only, the following date ranges are used to determine presence in the Directory feed: Fall = 8/26-1/25, Spring = 1/26-5/31, and Summer = 6/1-8/25.) Graduate students who have not been registered for longer than a year will be kept in the directory feed as long as they maintain an "admit" status with the Graduate School. Note: As of 9/04, Veterinary Medicine students were excluded from the directory because all of their work is performed at Virginia Tech. As of 4/06, Freshman Connection students were added to the Directory.

- Newly admitted students (College Park) - Newly admitted students who have been notified via letter but have not registered for their admit semester, are in the Directory and remain until two weeks after the start of the admit semester if they do not register.

- Employees (College Park, USMO, UMBI, UMCES & UMES) – Employees, including hourly student employees, are in the Directory while they have active appointments. Employees who separate from the university stay in the Directory (and remain in the feed from PHR) for 30 days past their last PHR Appointment Termination Date. Exceptions include Tenured (Cat Stat = 01) and Tenure-track (02) faculty who retire will remain in the Directory for 180 days. Non-tenured, 22-pay faculty with an appointment termination date between 06/01 and 07/31 and in the following category statuses will remain in the Directory for 90 days: Term Contract (03), Continuing Contract (15), and Non-regular (37). Note: this 30/90/180 rule was implemented on 09/11/2009. Prior to this change, employees remained in the Directory for 270 days past their PHR Separation Date.

- Affiliates (College Park) – Affiliates are in the Directory until their expiration date is reached. Affiliate records are only used if no student or employee record is found.
Data stored in the Directory and Access Levels

Attributes in the Directory are assigned a class, that defines access depending on whether the user is anonymous, authenticated, or an application (see Directory Matrix of Anonymous vs. Authenticated Access in this document):

- Normal – attributes that are visible to the public (under the appropriate conditions) without special authorization. Un-authenticated users see normal attributes only.
- Sensitive – attributes that fall in between normal and critical – they are less critical but require more scrutiny than normal attributes; no attributes are currently designated as sensitive.
- Critical – attributes which require special authorization to be seen. All attributes with a class of “critical” are only accessible to authorized users after approval for each requested element from the data steward.

Special authorizations are achieved by establishing an application DN (previously termed an auth dn), which includes a DN (“Distinguished Name” which is essentially a user ID) and an associated password. The DN and password are used by approved applications to established authenticated access.

The classes, normal/sensitive/critical have no meaning, in and of themselves, but exist to allow access control rules to be assigned to groups of attributes at a time rather than having to explicitly list each attribute. These classes are independent. Granting access to one class implies nothing about access to any other class.

Normal attributes as of 7/17/04 are:

<table>
<thead>
<tr>
<th>“Normal” Type Directory Attribute</th>
<th>On-line search of Directory via OIT web page</th>
<th>Search of “publishable” section of the Directory database</th>
<th>With Application DN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cn</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>departmentNumber</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EmployeeNumber (U ID)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>givenName</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Initials</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>labeledURI</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Mail</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>middleName</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>o (University of Maryland)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>ou (dept or student)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>postalCode</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sn</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Title</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Uid (Directory ID)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Attribute</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>umAffiliate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umAlternateMail</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umAlumni</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umCampusBuilding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umCampusBuildingCode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umCampusRoom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umCampusZipcode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umDepartment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umDisplayName</td>
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<td></td>
<td></td>
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<td>umDisplayNameLF</td>
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<td>umDisplayTitle</td>
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<td></td>
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<td>umEmeritus</td>
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</tr>
<tr>
<td>umEmeritusActive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umEmeritusInactive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umEmployee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umEmployeeCollegeCode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umEmployeeDivisionCode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umEmployeeTitleCode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umFaculty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umGenericUid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umHourlyStudentEmployee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umInitials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umInstitution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umInstitutionCode</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>umMailAlias</td>
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<td></td>
</tr>
<tr>
<td>umMailFwd</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>umMiddleInitial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umNamePrefix</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>umNameSuffix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umNickName</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umNoPublishAddress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umNoPublishCell</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umNoPublishFax</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umNoPublishPager</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>umNoPublishPhone</td>
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<td></td>
<td></td>
</tr>
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<td>umOfficialTitle</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>umOptionalTitle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPrimaryCampusBuilding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPrimaryCampusBuildingCode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPrimaryCampusRoom</td>
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</tr>
<tr>
<td>umPrimaryCampusZipcode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPrimaryDeptCode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPrimaryDeptName</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPrimaryInstitution</td>
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<td></td>
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</tbody>
</table>
Critical attributes as of 3/1/07 are:

<table>
<thead>
<tr>
<th>“Critical” Type Directory Attribute</th>
<th>On-line search of the Directory via OIT web page</th>
<th>Search of the “publishable” section of the Directory database</th>
<th>If approved with Application DN</th>
</tr>
</thead>
<tbody>
<tr>
<td>EmployeeNumber (U ID)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>facsimileTelephoneNumber</td>
<td>X*</td>
<td>X*</td>
<td>X</td>
</tr>
<tr>
<td>homePhone</td>
<td>X*</td>
<td>X*</td>
<td>X</td>
</tr>
<tr>
<td>homePostalAddress</td>
<td>X*</td>
<td>X*</td>
<td>X</td>
</tr>
<tr>
<td>mobile</td>
<td>X*</td>
<td>X*</td>
<td>X</td>
</tr>
<tr>
<td>pager</td>
<td>X*</td>
<td>X*</td>
<td>X</td>
</tr>
<tr>
<td>postalAddress (office/local)</td>
<td>X*</td>
<td>X*</td>
<td>X</td>
</tr>
<tr>
<td>telephoneNumber</td>
<td>X*</td>
<td>X*</td>
<td>X</td>
</tr>
<tr>
<td>umAffiliateType</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umAffiliateTypeCode</td>
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<td></td>
</tr>
<tr>
<td>umAppointment</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umBMGTpassword</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umBMGTuserid</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umBSOSlabBalance</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umBuckleyFlag</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umCatStatus</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umCatStatusCode</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umClassStanding</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umCollege</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umCollegeCode</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umDateOfBirth</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umDistrList</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umDistrListCode</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umEEO</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Attribute</td>
<td>Access</td>
<td>Display</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------</td>
<td>---------</td>
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</tr>
<tr>
<td>umEEOcode</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umGender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umId (SID, UMID, FID)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>umIdHash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umLocalAddress</td>
<td>X*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>umLocalPhone</td>
<td>X*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>umMajor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umMajorCode</td>
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<td></td>
</tr>
<tr>
<td>umMinor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umMinorCode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umParentPinHash</td>
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</tr>
<tr>
<td>umPasswordChangeDate</td>
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<td></td>
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<tr>
<td>umPasswordExpireDate</td>
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<td></td>
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<td>umPasswordResponse</td>
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<tr>
<td>umPasswordUserChallenge</td>
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<td></td>
</tr>
<tr>
<td>umPermanentAddress</td>
<td>X*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPermanentCountry</td>
<td>X*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPermanentPhone</td>
<td>X*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPinHash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPrimaryCollege</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPrimaryCollegeCode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPrimaryMajor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umPrimaryMajorCode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umRegBMGTcourse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umRegBMGTcourseCur</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umRegCourse</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>umRegCourseCur</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umRegBBGroupcourse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umRegBBGroupcourseCur</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umRegInstructorOf</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>umRegStatus</td>
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<td>umServices</td>
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<tr>
<td>umStudentStatus</td>
<td></td>
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</tr>
<tr>
<td>umTermDateStudent</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>umVoiceMail</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>userPassword</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Access and display of “critical attributes” with an “X*” are dependent upon privacy flags set by the employee/student/affiliate. If a person is an employee in a student employment category (04 graduate assistant, 14 undergraduate hourly student, or 16 graduate hourly student) AND a student, the SIS privacy flag is used. For example, if publish is set in SIS but not PHR, the information will be published. If a person is an employee in any other employment category except 04, 14, or 16 AND a student, the logical “OR” of all the PHR and SIS flags determines if information is published. For example, if publish is set in SIS but
not PHR, indicated information will not be published. Also, if confidential flags indicate publish, data will only be visible after authentication by authorized users.

Other “system” attributes associated with each object in the Directory exist, and are used for administrative purposes internally to the Directory. This includes things such as ibm-entryUUID, entryOwner, and aclPropagate.

A listing of all attributes and their access level can be found at: http://www.oit.umd.edu/middleware/directory/schema

The following attributes were removed from the Directory (July 2004) because they were not needed and were not being populated:

- umEEO6
- umEEO6Code
- umHRmailing
- umHRmailingCode
- umNoPublishPhoto
- umNoPublishURI

Effective 10/2/04, attributes under umRegENGR* and umRegCMPS* were switched to umRegBBGroup* for the Blackboard server run by Engineering. The old attributes have been removed from the Directory.

Effective 8/5/06, attribute EmployeeNumber was changed from a “public” attribute to a “critical” attribute in the Directory.

Effective 5/26/07, attributes umEmployeeCollegeCode and umEmployeeDivisionCode were added to the Directory to facilitate easier filtering of employees to a specific division or college.

Effective 1/26/08, Directory personnel converted four existing attributes (umCollege, umCollegeCode, umMajor, umMajorCode) to be multi-valued. Applications which had access to those attributes retained that access. Four new single-valued attributes were added (umPrimaryCollege, umPrimaryCollegeCode, umPrimaryMajor, and umPrimaryMajorCode). These attributes contain the single value that was previously found in umCollege, umCollegeCode, umMajor, and umMajorCode. Access to these attributes was grandfathered for those applications that had access to the current corresponding single-valued attribute. Also added two new multi-valued attributes for minors (umMinor, umMinorCode).

Effective 10/6/08, we began populating the data attribute “mobile” with student cell phone data.
Precedence of Data Loading

1) PHR Data—multiple appointments are merged together. For certain single valued attributes (e.g. givenName), if the values do not match, the value from the record appearing later in the feed is ignored and an error message is logged. The primary appointment indicator is considered when populating certain attributes (e.g. umPrimaryTitle). Active emeritus only (emeritus status with no appointment) are also included.

2) SIS Data—if an existing entry from PHR is found the data is merged in, with PHR values taking priority. If more than one record exists in the SIS data for a given U_Id, only the first record is used and all subsequent records are rejected (with an error message in the log).

3) Affiliate Data—if an entry has already been found in the PHR or SIS data, an affiliate record for the U_Id will be rejected.

4) UPS Data—used only for persons who are in the SIS feed but not in any other feed. The fields used in the UPS data are U_Id, SSN, Last_Name, First_Name, Middle_Name, Prfx_Name, Sufx_Name, Gender_Cd, Alumni_Ind and URL. These values take precedence over values from SIS. Three (3) UPS extracts are received for the Directory.

5) PIN Data—used to populate the umPinHash and umParentPinHash attributes.

6) Course Data—used to populate the various umReg* attributes.

Note:
- Each person has only one entry in the directory but some attributes can be multi-valued.
- On 9/25/04 the following logic was implemented for loading addresses (and their associated phone numbers; ( ) indicate which information is displayed when performing an on-line search if confidential flags are set to publish the information:
  - Person is an employee being loaded from the PHR feed:
    - postal address = PHR-business_address (displayed)
    - umLocalAddress = PHR-home_address (not displayed)
    - umPermanentAddress = PHR-home_address (displayed)
  - Person is a student being loaded from the SIS feed:
    - postal address = SIS-local_address (displayed)
    - umLocalAddress = SIS-local_address (not displayed)
    - umPermanentAddress = SIS-permanent_address (displayed)
  - Person is an employee and student being loaded from the PHR & SIS feeds:
    - postal address = PHR-business_address (displayed)
    - umLocalAddress = SIS-local_address (displayed only for hourly student employee)
    - umPermanentAddress = PHR-home_address (displayed)
  - On 10/2005 logic was revised such that if a person is primarily a student and also holds an appointment in PHR with category status of 04, 14 or 16, the person’s privacy flag in SIS will govern whether or not the address, phone, cell, pager and fax should be visible in the on-line search.
Refresh of Data in the Directory
The following data elements within the Directory can be/are updated *real-time*:

- **PHR/UPS** – The Directory is updated real-time with the following from PHR/UPS:
  - telephoneNumber - Office Phone
  - umMailFwd - Email
  - umNoPublishAddress - Publish Home Address
  - umNoPublishPhone - Publish Home Phone

  **Note**: As of 2/18/04, the above fields are updated real-time by the PHR Employee Display/Update Personal Data screen. They are not currently updated real-time by the NetDynamics versions of the Employee/Appointment screens; they will be updated real-time when the new WebSphere Employee/Appointment screens are implemented.

- **PHR** has permission to update the following attributes directly but is not updating them at this time:
  - umDisplayTitle
  - umNoPublishCell
  - umNoPublishFax
  - umNoPublishPager
  - umNoPublishPhoto

- **SIS** – The Directory is updated real-time with the following from SIS
  - umMailFwd (Note: This happens only if the email address was updated via Testudo.)

- **SIS/ARES/Testudo** have permission to update the following attributes directly:
  - UmMailFwd
  - umPinHash

The following data within the Directory are updated *daily*:

- **From PHR/UPS**
  - For new employees in PHR, employee data (name, address, phone, etc.) and appointment data are inserted daily.
  - Prior to 8/5/06, only changes to umPinHash were updated daily for existing PHR employees in the Directory.
  - Effective 8/5/06, all employee attributes in the Directory that come from the PHR employee feed are updated daily.

- **From SIS** (Note: Although the information is transmitted nightly, if the student was not considered a "student" with the last full weekend load, there will not be an existing record to update)
  - Effective 8/4/03, all confidentiality codes in SIS SMS, including umBuckleyFlag.
  - umPinHash
  - umRegBMGTcourse
  - umRegBMGTcourseCur
  - umRegBMGTcredits
  - umRegBMGTgradeOpt
The following data within the Directory are updated weekly on Saturday AM:

• A full reload of all employees in PHR as described in the section above (Who is included in the Directory) is performed every Saturday AM. Employee and appointment data are included.
• A full reload of students as described in the section above (Who is included in the Directory) is performed every Saturday AM.

PHR data quality requirements and error handling:

• The PHR record will be rejected if any of these fields are blank:
  o U_Id
  o SSN_Id
  o Last_Name
  o First_Name
  o Conf_Admin_Cd
  o Unit_cd
  o USM_Inst_Cd
  o USM_Inst
  o Dept_Subdept_Cd
  o Dept_Subdept
  o DOB
  o Cell_Phone_Conf_Ind
  o Pager_Conf_Ind
  o Fax_Conf_Ind
  o Home_Phone_Conf_Ind
  o Pos_Title_Cd
  o SD_Title
  o Pub_Opt_Title_Ind
  o Multiple_Appt_Ind
  o Curr_Pri_Pos_Ind
  o Cat_Stat_Cd
  o Cat_Stat
  o Fac_Staff_Cd
  o Alumni_Ind
Invalid data (if not blank) in any of the following PHR fields will cause a record to be rejected:
- U_Id
- SSN_Id
- Conf_Admin_Cd
- Unit_cd
- USM_Inst_Cd
- Dept_Subdept_Cd
- DOB
- Gender_Cd
- Cell_Phone_Conf_Ind
- Pager_Conf_Ind
- Fax_Conf_Ind
- Home_Phone_Conf_Ind
- Pos_Title_Cd
- Pub OPT_Title_Ind
- Multiple_Appt_Ind
- Curr_Pri_Pos_Ind
- Cat_Stat_Cd
- Fac_Staff_Cd
- Alumni_Ind
- Sep_Dt
- EEO_Cd
- Distr_List_Cd

Invalid data (if not blank) in any of the following PHR fields will cause that field to be ignored:
- Bus_St_Cd
- Bus_Cntry_Cd
- Bus_Zip_Cd
- Office_Phone
- Cell_Phone
- Pager
- Fax
- Campus_Zip_Cd
- Email.Addr
- URL
- St_Cd
- Cntry_Cd
- Home_Zip_Cd
- Home_Phone

SIS data quality requirements and error handling:
- The SIS record will be rejected if any of these fields are blank:
  - SSN
• Type (Type determines ou attribute – Student.UG.Admitted [undergrad admitted with letter sent], Student.UG [undergrad], Student.GR [grad], and Student.NC [non-credit])
• Privacy_Code [populates umBuckleyFlag and umNoPublish flag for students; determines attributes that should be suppressed]
• UID

Invalid values in the following fields will cause the record to be rejected:
• SSN
• Type (Type determines ou attribute – Student.UG.Admitted [undergrad admitted with letter sent], Student.UG [undergrad], Student.GR [grad], and Student.NC [non-credit])
• Privacy_Code [populates umBuckleyFlag and umNoPublish flag for students; determines attributes that should be suppressed]
• UID

Invalid data (if not blank) in any of the following SIS fields will cause that field to be ignored:
• Birth_Date
• College_Code
• Email_Address
• Local_Country
• Local_State
• Local_Zip
• Local_Phone
• Major_Code
• Permanent_Country
• Permanent_State
• Permanent_Zip
• Permanent_Phone
• Standing

Data Notes:
• Student attributes - 7/28/03 removed umMajor, umCollege and umClassStanding from public and authenticated searches; only available to approved Application DN accounts.
• Freshman Connection – 04/05/06, Freshman Connection students (SIS code 18) were added to the Directory. The umStudentStatus for Freshman Connection students will be populated with “ugrad”.
• Employee Prefix - 7/30/03 UHR approves only displaying the prefix of "Dr" in the directory and no other prefixes.
• No Publish Flags - 8/4/03 per John Pfeifer daily updates to the umBuckleyFlag (FERPA status) are being performed along with updates to the related umNoPublish flags and the necessary access control entries to enforce them. The umBuckleyFlag attribute is set exclusively from SIS. If a person is both employee and student, the logical “OR” of all the PHR and SIS flags determines
if information is published. For example, if no-publish is set in SIS but not PHR, indicated information will not be published.

- **Academic Year Faculty** - Handling of academic year faculty (9, 9.5 or 10 month) who are tagged as “inactive” over the summer (Employee Status Code – N – not active but returning 9.5 month employee) but should be displayed in the Directory. Per Louis Kavakos, 3/3/04, these employees are included in the data feed to the Directory. The following Empl Status Codes are included: A (active), R (reinstated for payment), Q (non-paid only), and N (returning to academic appt).

- **Terminated Employees/Students/Affiliates**
  - Neither umTermDateStudent nor umTermDateAffiliate are populated from any source.
  - UmTermDate is the maximum of umTermDateEmployee, umTermDateAffiliate and umTermDateStudent. Since the latter two are not populated this attribute is only populated for employees. UmTermDate Employee is populated from PHR.SEP_DT. The PHR separation date contains the position termination date (date the termination was processed in PHR; not necessarily the actual date of termination) of the only remaining appointment that has terminated.
  - Terminated with Future Appointment - From PHR, for those employees with Employee Status Code = “T” (Terminated with a Future Appointment), the record that has the latest pos termin date with a pos rec stat = “I” and Pri Pos Ind = “Y” is loaded. If there are multiple records that meet the above criteria, the record with the largest pos_id will be selected.

- **Non-resident alien independent contractors** - Per Dale Hough, 3/11/04, non-resident alien independent contractors will not be included in the employee data feed, therefore will not be in the Directory. Fellows are not included in PHR (they are processed through Financial Aid); if a department wishes to sponsor them they would be entered via the umail database.

- **SIS data quality** - Per Eloy Areu/Jeff Lemich, 3/15/04, AEA-SAS, agreed that blank or invalid values in the following fields will cause the record to be rejected: SSN, UID, Type and Privacy_Code. Also, invalid values for the following fields will cause the record to be ignored: College_Code, Major_Code, Birth_Date and Standing.

- **Adding Student.UG.Admitted** - Per Eloy Areu/Jeff Lemich, 3/15/04, AEA-SAS, agreed with adding another value to the “ou” attribute - “Student.UG.Admitted” to enable distinction between enrolled students and students admitted with letter sent. They also agreed that the umStudent boolean attribute would be TRUE for all ou student values.

- **"ou" definition** - Per David Henry, 3/17/04, the "ou" attribute refers to the "organizational unit" within an organization and may contain one or more values. For faculty and staff, the ou attribute contains the long description of the primary appointment unit, for example, ou=OIT-TSS-Enterprise Internet Services. For students, the values are: Student.UG.Admitted [undergrad admitted with letter sent], Student.UG [undergrad], Student.GR [grad], and Student.NC [non-credit]). Effective July 2004, the student status component (UG.Admitted, UG, GR and
NC) of the “ou” attribute, has been removed and placed in a separate attribute, “umStudentStatus” which is a “critical” attribute. Therefore “ou” contains the unit description of the primary appointment unit for faculty and staff, and the word “student” if the person’s status is student.

- **Adding umRegStatus** - Effective 3/1/07, critical attribute umRegStatus was approved to be included in the Directory. This attribute contains the status of a student: R = registered, N = not registered, A = newly admitted undergrad, non-registered, G = graduate student, non-registered

- Effective 3/1/07, umRegBBCourseCurr will only include ENGR courses – this attribute will be used only by Engineering to facilitate an online course evaluation application.

- Effective 7/23/10, these attributes were removed from the Directory since applications were no longer using them:
  - umRegBMGTcredits
  - umRegBMGTgradeOpt
  - umRegBBGroupCredits
  - umRegBBGroupGradeOpt
  - umRegMATHcredits
  - umRegMATHgradeOpt
  - umRegCredits
  - umRegGradeOpt

- Effective 7/28/10, course registration and instructor data is retrieved directly from SIS Oracle production instead of via a mainframe batch job. This provides the LDAP Directory with more up-to-date information and more complete information on instructors. The current instructor information is inferred from the the course registration feed. This method has two limitations: 1) no instructor information is present until a student is registered for a given course and 2) for courses with multiple instructors, there is no guarantee that all instructors will be listed. Separating the existing feed into two oracle queries solves both issues.

- **Hourly Student Employees** –
  - July 2004, hourly undergraduate (category 14) and hourly graduate students (category 16) in the PHR system were added to the Directory. They have the same visibility as students if they are also a student of UMCP; otherwise, they will be treated as employees. Accessibility to their student and/or employee data is based on the Directory Matrix, normal attribute table and the critical attribute table.
  - The umEmployee and umHourlyStudentEmployee attributes will be set to “TRUE” for all hourly student employees.
  - **Students who were a non-hourly employee and their appointment ends.** If a student has a non-hourly appointment and it terminates, the current rule is that they stay in the directory for 270 days and then drop out of the employee feed. Because there are issues with losing services (higher allocations for email, etc.), per Dave Robb, 2/10/04, students who have non-hourly appointments and return to only enrolled student status, should stay in the Directory for 270 days.
Person/role indicators - There are several Boolean values in the directory to indicate the general relationship and individual has with the university. These include umstudent, umfaculty, umstaff, umemployee, and umaffiliate.

- The umEmployee attribute is set to “true” if the person has an entry in the PHR feed.
- The umStaff attribute is set to “false” if the employee is an hourly student employee (undergraduate [14] or graduate [16]).

Deceased persons

- Deceased employees are extracted and included in the feed to the Directory with Deceased Indicator set to TRUE.
- Deceased students are extracted and included in the feed to the Directory. Their deceased date is sent in the weekly "UPS" file. The have had the Buckley flag turned on by the Office of the Registrar; their address is changed to that of the Registrar's Office. Per Mary Ann Granger, 3/31/04, Jeff Lemich will exclude deceased students from the feed to the Directory which means they will be dropped from the Directory as soon as they are no longer in the feed.

Directory ACLs

The following describes the access control levels that control levels of granularity for securing data in the directory:

- Institutions: umInstitutionCode - contains the first two digits of the Unit Code (01=UMCP, 03=UMBI, 04=UMES, 07=UMCES, 08=USMO).
- Population:
  - Employees - umEmployee=True (anyone with an entry in the PHR feed has umEmployee=True, otherwise it is False). [will need to double check with Registrar since this includes hourly students]
  - Students - umStudent=True (anyone with an entry in the SIS feed has umStudent=True, otherwise it is False).
- Affiliates
  - Division/College for Employees
    - Division: umUnitCode - Division is unique if you use the first 4 digits of the 15-digit Unit Code:
      - 0101 - UMCP-President (PRES)
      - 0105 - UMCP-University Relations (VPUR)
      - 0110 - UMCP-Student Affairs (VPSA)
      - 0115 - UMCP-Administrative Affairs (VPAA)
      - 0120 - UMCP-Academic Affairs (SVPAAP)
      - 0140 - UMCP-Office of Information Technology (OIT)
    - College: umUnitCode - College is unique by using the first 6 digits of the 15-digit Unit Code; will only be used for academic Colleges within Academic Affairs:
      - 012021 - UMCP-SVPAAP-UGST
      - 012024 - UMCP-SVPAAP-GRAD
      - 012025 - UMCP-SVPAAP-AGNR
      - 012026 - UMCP-SVPAAP-ARCH
- 012027 - UMCP-SVPAAP-ARHU
- 012028 - UMCP-SVPAAP-BSOS
- 012029 - UMCP-SVPAAP-BMGT
- 012030 - UMCP-SVPAAP-CMPS
- 012031 - UMCP-SVPAAP-EDUC
- 012032 - UMCP-SVPAAP-ENGR
- 012033 - UMCP-SVPAAP-HLHP
- 012034 - UMCP-SVPAAP-JOUR
- 012035 - UMCP-SVPAAP-CLIS
- 012036 - UMCP-SVPAAP-LFSC
- 012037 - UMCP-SVPAAP-PUAF
- 012039 - UMCP-SVPAAP-SGC

- umCollegeCode - umCollege for Students (College Codes in SIS are not the same as those used in PHR/FRS – a partial mapping is supplied in Appendix A):
  - 00 - AGNR
  - 14 - ARCH
  - 29 - ARHU
  - 23 - BMGT
  - 28 - BSOS
  - 30 - CLIS
  - 27 - CMPS
  - 03 - EDUC
  - 04 - ENGR
  - 05 - GRAD
  - 09 - HLHP
  - 21 - JOUR
  - 26 - LFSC
  - 22 - LTSC
  - 24 - PUAF
  - 99 - SPEC
  - 25 - UGST
  - 10 - UMUC
  - 31 - UNKN
  - 88 - WORK
  - All graduate degrees are associated with the Graduate School rather than an individual College)
  - For undergraduates, College Code represents the college that is responsible for the progress of the student.
  - College codes are 2-digits.

Rules:
- UMCP students are blocked from being seen by authenticated non-UMCP users.
- When Application DN are requested by College Park users, they will only be given data for College Park; if they want “critical” attributes for other institutions they must be requested and approved. Note: This will be implemented for
existing College Park Application DN accounts as soon as other institutions are added to the Directory.

- For Application DNs only, the requester receives all of the normal attributes plus those critical data attributes requested and approved.
- Application programmers must program their applications to handle the situation where a person is in multiple institutions in the Directory and should authorize access to that application based on their status at a particular institution. The Directory will not handle this. Authentication is independent of the status of the individual and their relationship with the various institutions. It is up to the particular application to decide if someone should be authorized to use it.

For more information on the Directory Services Access Model refer to:
http://www.oit.umd.edu/middleware/directory/internals/access.html

For more information on Directory Services Access Control Levels refer to:
http://www.oit.umd.edu/middleware/directory/internals/acl.html

Directory Matrix of Anonymous vs. Authenticated Access

The populations of people in the Directory that can be accessed are determined in part by whether authenticated or unauthenticated searches are performed.

- Authenticated users can view entries for faculty, staff, graduate assistants, non-FERPA students, and affiliates. (Note: FERPA students are those students who have exercised their rights to keep all data about themselves confidential. Also, in this case, the authenticated access is user authentication and is not via an Application DN.)
- Non-authenticated (anonymous) users can view entries for faculty, staff, and affiliates. No data is available on students.

The following matrix that further defines access options was approved on 2/6/04. A person in the Directory can have one or more roles - faculty/staff only, student only, and both faculty/staff and student. The affect of a student invoking Buckley rights is also defined.

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<tr>
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<tbody>
<tr>
<td></td>
<td>Fac/Staff</td>
<td>UMCP student</td>
<td>Buckley</td>
</tr>
<tr>
<td>1</td>
<td>x</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>x</td>
<td>x</td>
<td>no</td>
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<td>x</td>
<td>x</td>
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<td>7</td>
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<td>8</td>
<td>x</td>
<td>yes</td>
<td>x</td>
</tr>
</tbody>
</table>
| 9                | x        | -           | x       | Yes | Yes (fac/staff and}
Notes:

- Access in the Directory is determined by examining the following criteria:
  - What authentication was provided (none/person/application)?
  - Does that authentication allow a user to see the person/object(s) that matches their filter string?
  - Does that authentication allow the user to see the requested attributes of the matched person/object(s)?
- If a person performs an authenticated search on their own entry in the directory, they will receive only the “normal” attributes.
- Also, if confidential flags indicate publish, data will only be visible after authentication by authorized users.
- If a person is a separated employee, and the department sponsors them as an “affiliate”, they will not appear in the web search for 270 days after the separations date; once the 270 day limit is reached, they will appear in the web search due to their presence in the “affiliate” database.
- April 2004, hourly undergraduate and hourly graduate students in the PHR system were added to the Directory feed. Access to information about these hourly students is defined in the Directory Matrix. Access to attributes is defined in the tables describing Normal and Critical attributes.
  - From the Directory Matrix, if a user authenticated (not using an application DN) they would be able to see entries for all hourly student employees except those with the Buckley flag set. This includes those that are only student hourly employees as well as those that are also faculty/staff and student.
  - Based on the conditions described in the Directory Matrix, a user will be able to see all of the attributes marked with an X in the second column of the "Normal" table and those in the Critical table with an X* in the second column and the appropriate privacy code. If confidential flags indicate publish, critical data will only be visible after authentication by authorized users.
  - Major and Class Standing are never visible and the umStudent, umHourlyStudentEmployee are visible (in each case, independent of the student hourly employee status).
  - Major, Class Standing, registration information and all other related academic information is never visible to anyone except for special authorized access as approved by the data steward.

Uses of the Directory
The Directory may be used for a variety of purposes and applications, but generally is used for:
- White pages or phonebook lookup.
- User authentication or verification of an ID and password pair.
• Discovery of characteristics about an individual, typically for making authorization decisions.

**White Pages – Phonebook Search**

One of the uses of the Directory is to make data available to find a person as you would in a phone book. There are several methods in which this is accomplished:

• On-line search of the “publishable” Directory via the web.
• Search of the “publishable” section of the Directory via LDAP.

Generally, the Directory search web page can display the list of normal attributes marked with an “X” or certain critical attributes marked with an “X” and with permission granted. Refer to the table of normal attributes earlier in this document. General searches of the database can return any of the normal attributes. Authorized searches of the database can return critical attributes for which explicit permissions in addition to all normal attributes. Additional information regarding display of information can be found in Appendix D.

**On-line search of the Directory via OIT web page**

An on-line name only search of the Directory is available via [https://www.directory.umd.edu/search](https://www.directory.umd.edu/search) to anyone who can access the web. The following information is displayed with an on-line search per the access rules listed below:

• Name
• Directory ID
• Email address
• Appointment Title and Department (employees only)
• Business Office address, business phone (employees only)
• Pager, cellular phone and fax (not displayed unless person indicates information is public)
• Home address and phone (not displayed unless person indicates information is public)
• Local address and phone (holds student addresses when they are in residence in the College Park area and employees addresses for visiting employees whose permanent residence is elsewhere). Local address/phone is the same as home address/phone over the summer for students.

Note: A person in the Directory with appointments at multiple institutions will be displayed with the primary appointment at the primary institution only.

Check boxes will be available to search by institution. Information will only be accessible for institutions choosing to have their information available. The web search tool will default to the UMCP check box. If results are desired from a single institution, only that institution’s check box should be selected. If results are desired from multiple institutions, all desired institution check boxes should be selected. Check boxes may be de-selected.
Search of the “publishable” section of the Directory database

A search on any attribute of “publishable” information in the Directory is available to anyone who can access the Directory database with programs that speak the LDAP protocol or with an LDAP-based search tool. The same information available to on-line search users is available via this method of search plus additional attributes. The attributes a user can retrieve, is based upon normal vs. critical attribute types, and whether the user is authenticated/unauthenticated.

Application Access to Directory data via an Authorized Account

Many University applications (OIT sponsored applications as well as departmental applications) use directory information. One of the major purposes is for authentication but it is also used to retrieve basic person information.

A wider range of Directory data can be made available to University applications (any attribute could be made available) – all of the normal attributes plus those critical data attributes requested and approved (See normal and critical attributes tables in this document).

Special note: For Application DNs that are approved for employee permanent address/phone, developers will receive access to all employee address/phone numbers regardless of whether the employee has indicated “Y” for confidential. Language will be included in the data access agreement that the developer must agree to indicating that they will not use the address/phone numbers of those who indicated they are confidential.

There is an established procedure for requesting access for Directory data (see the Office of Data Administration’s Data Architecture document). Once approvals have been granted, an account is established for each application requesting Directory data.

Access to information in the directory by approved applications is controlled by special ID/password credentials, which are referred to as Application DN's. Application DN's may access all information available to an anonymous connection plus those entries and attributes explicitly granted to a given Application DN.

Addition of 3A Institutions to the Directory

Effective July 2004, 3A Institutions (USMO, UMBI, UMCES, UMES) were added to the Directory. Additional agreements and rules were established regarding their presence in the Directory:

- 3A Institutions can be identified by their institution code. The umInstitutionCode attribute in the Directory contains the first two digits of the Unit Code (01=UMCP, 03=UMBI, 04=UMES, 07=UMCES, 08=USMO).
- When a 3A institution makes their data available (e.g. OIT web search page, UMCP applications granted access by the 3A data steward), data for the entire
institution (all unit codes) is accessible; data for that institution will not be made available for selective units only.

- Anonymous binds only return faculty and staff results for those institutions that elect to make their information public (this applies to binds directly against the server and via the web search tool). Currently, this means that only UMCP results will be returned with an anonymous bind. For example, once 3As are added, if USMO elects to have their information accessible, a search directly against the database will return results for UMCP and USMO. Further, the directory is not set up such that if USMO elects to have their information accessible, USMO people can only see USMO people, UMCP sees only UMCP people, etc.

- The above statements will also apply to searches of the directory from email. For example, if I type John Smith on the "to" line of my email, if USMO elected to make their information public, all email addresses for "John Smith" at UMCP and USMO would be displayed.

- Authenticated binds additionally return non-Buckley UMCP students for searches done by UMCP people. Searches done by non-UMCP authenticated people will not return non-Buckley UMCP students.

- UMCP authenticated applications can be granted access to other institutions on a per application basis, as approved by the other institution data stewards.

- Check boxes will be available to search by institution. Information will only be accessible for institutions choosing to have their information available. The web search tool will default to the UMCP check box. If results are desired from a single institution, only that institution’s check box should be selected. If results are desired from multiple institutions, all desired institution check boxes should be selected. Check boxes may be de-selected.

- As of 7/6/04, UMBI, UMCES and UMES do NOT want to be included in the on-line search of the Directory via the OIT web page. USMO is the only institution that does want to be included in the on-line search of the Directory via the OIT web page.

The following process will be followed when College Park applications request 3A institution data:

- In the case where a 3A individual/institution requests a OIT service, before sending the request to ODA, EIS will ask/screen the requester to specify which 3A institution is requesting the service and specifics about who has requested the service (names, units). This is necessary to avoid unnecessary communication with a 3A institution that has not requested a service or was unaware that some of their employees have requested a service.

- In the case where an OIT unit wants to extend a UMCP service to all 3A institutions, EIS will send the request to ODA and include the list of *ALL* the data attributes that have already been approved, along with any extra attributes that need to be added, so that the 3As can review the entire list and decide if they want to participate in the service and approve the access for all of the attributes for all their employees.
• Kim Colbert, UHR, will take on the coordinating role with the 3As for data access requests for Directory data. EIS will send the requests to ODA; ODA will send the requests to Kim; Kim will send the requests to the appropriate 3A institution(s), Kim will send the response to ODA; ODA will send the response to EIS.

• Please note: Kim does not want to be involved with lengthy discussions with the 3As about the aspects of the service in the case where an OIT unit wants to extend a UMCP service, so if she gets inquiries she may defer them to the person who is offering the service.

• This process will be re-evaluated every 6 months to determine its effectiveness and the volume of requests generated.

Search Limits on the Directory
Searches on the Directory are performed in the following order:
- Collect all entries that match the query (across the entire Directory)
- Apply the access controls on the objects collected
- Return only those that satisfy the access controls

Effective 2/6/04, the search limits (maximum number of entries returned by a single search) are:
- Unauthenticated: ~50; for unauthenticated searches, a special application id (with search limits set to 70 or 80) will return the first 50 entries with the following message if the limits are exceeded: “Limit exceeded; please narrow the search (e.g. search for "t smith" instead of "smith")”.
- General authenticated: 100
- Authenticated with an Application DN: 1000 (there are a few applications that have been granted exceptions to this limit)

The search feature uses the following methodology to return values:
- Collect all entries that match the query
- Apply the access controls on the objects collected
- Return only those that satisfy the access controls

Registrar’s position on Student Data in the Directory
I distinguish between employee directory information (i.e., name, position title, office address, office tel. and office email) and student directory information (name, home address, home telephone, email, class standing, major, etc.). Graduate students who perform teaching, research or administrative work on a stipend should be treated like employees in terms of employee directory information. Within the Directory, we need to separate employment Directory information from student directory information for graduate assistants. Conversely, hourly student employees (undergraduate or graduate) should not be included in employee directories. On 6/25/03, Laura Anderson Wright in the Legal Office confirmed this treatment of directory information.

The employment records of students are considered "student education records" under FERPA; consequently FERPA rules do apply. The distinctions we make must be carefully crafted and must comport with FERPA. Per Dave Robb 2/10/04, newest
government publications on FERPA now treat both hourly students and graduate assistants in the same way (employment records of students are considered "student education records under FERPA"). Dave feels that there may be a few cases that we need to treat differently in exceptional circumstances but we should not change the way we are currently displaying graduate assistants from the PHR feed in the Directory.

The designation of directory information under FERPA was intended to respond to requests for information about single individuals. Compiling directory data on multiple students for use in generating lists or organizing solicitations goes far beyond the original intent of the “directory exception” in FERPA. Currently, the University of Maryland prints a paper student directory, which is intended to serve as the sole public listing of students. The difficulty in exploiting this paper listing is intentional. The Registrar’s Office does not wish to allow authenticated users to be able to search the Directory student database.

Directory Meetings:

- 7/16/03
  - Meeting participants: Barb Hope, Lori Kasamatsu, Mary Ann Granger, Dave Robb, Kim Colbert, David Henry, John Pfeifer, Bill Wright, Shaun Fleming, Jyoti Sawnhey.
  - Data from other institutions will not be added to the Directory until filtering/ACL control can limit access from one institution to another.
  - Student data must have real-time update of the confidentiality flags.
  - UHR will implement real-time updating of confidentiality flags in the Directory from the ARES Personal Update screen.
  - Most future Directory requests for additional student data not currently in the Directory will be handled outside the Directory.
  - When doing an authenticated search, a student's major and college must not be displayed.
  - Consider lowering number of records returned when doing a search.

- 2/6/04
  - Meeting participants: Barbara Hope, Lori Kasamatsu, Bill Wright, Carrie Bredenkamp, Louie Kavakos, Dan Carter, David Henry, John Pfeifer, Jyoti Sawnhey, Jeff Lemich.
  - Agreement on Directory Matrix
  - Agreement on ACL filtering – Institution, employee & student, division, college
  - Agreement on limiting the search limits (maximum number of entries returned by a single search)
  - Agreement on handling of hourly student appointments that change
  - Agreement on rejected records from SIS if blank or invalid.
  - Agreement on rule that application programmers must program their applications to handle the situation where a person is in multiple institutions in the Directory and should authorize access to that application based on their status at a particular institution.
Agreement on rule that for Application DNs only, the requester receives all of the normal attributes plus those critical data attributes requested and approved.

Directory items that Need to be Resolved/Implemented

- **David/John** - Only allow access to the following link with authentication via the Directory: [http://webhosting.umd.edu/howto/cfldap.html](http://webhosting.umd.edu/howto/cfldap.html). Change the wording on that site to make it less obvious how to query the ldap server for information. Per David 3/5/04, EIS is looking into the issue of limiting access. EIS will change the wording to include a statement requiring each application to request and be approved for an Application DN.

- **David/John** – Change U ID from “normal” to “critical”. OIT plans to use an identifier other than employeenumber (U ID) as the primary identifier. This will take some time to develop and implement due to testing, educating application developers, and testing all existing applications that use the Directory. Once this change has been completed, U ID can be changed to “critical”.

- **David/John** - Hourly students in the Directory feed from PHR: Per David 3/5/04, hourly student employee information will be included in the directory at the same time as the addition of the 3A institutions.
  - Hourly student employees who are not enrolled at College Park. We hire high school students in the summer and we hire students who attend other institutions. We would like to get these students into the Directory so that we can give them services - email, etc. FERPA only applies to students enrolled at College Park so these folks do not need the same protection in the Directory as those enrolled at College Park. Per the Registrar and UHR, 10/10/03, if a person is an hourly student and is not enrolled at College Park, their hourly student employment record should be loaded into the Directory. Per David 3/5/04, this will be in place when the 3A’s are in the directory.
  - Students who change employment categories from a non-hourly student employment category (e.g. Contingent 1, Faculty non-tenured, etc.) to an hourly student category (hourly undergrad, hourly grad). Currently, when a person is in a non-hourly student employment category, our rule is to keep them in the Directory for 270 days after their termination date. We do this for folks who come and go (i.e. teach every fall) so that they don't drop out of the Directory and lose services (email accounts, calendaring, etc.). In the case where a person is employed as a non-hourly student and then changes employment status to hourly student, they are dropped from the Directory because the Directory does not get loaded with hourly student records. **Per the Registrar and UHR, 10/19/03, if a person was employed as a non-hourly student employee and changes their employment category to hourly student, AND they are enrolled at College Park, we should ignore the 270 day rule because their student status takes precedence, and drop their non-hourly employee appointment data from being displayed/accessible/loaded into the Directory upon termination of the non-hourly appointment.** Can this
be implemented in the Directory? The way the current employee feed works, you would get two entries in the feed for a person in this situation - (1) a non-hourly student appointment (anything with a cat stat cd NOT = 14,16) with a termination date and (2) a current hourly student appointment.  

**Solution – need to drop the non-hourly appointment once student enrollment status is determined.** Per John Pfeifer, 3/16/04, if a person has multiple PHR records, the records are merged together as they are found rather than collecting them in an array and merging after all the records are read. Then the SIS feed is read and merged in. Thus, the mkldif program doesn't know that the individual is a student until after all the PHR data has been merged together. Still need a solution because PHR feed does not know if the person is an enrolled student.

- **Carrie/Jeff/Bill/David/John (will have separate meeting to discuss this) -**
  Need to develop a methodology (possibly adding indicators to UPS and SIS) to handle special access cases in the Directory:
  - Employee is active and should receive services but all information should be suppressed as if they were a FERPA student.
  - Employee has been terminated under circumstances where they should not receive any services, their data should not be displayed, and an Application DN should not be able to pull that person into their application. [Implies that such people would not be included in the data feed.]
  - Others on the employee side?
  - Cases on the SIS side (e.g. deceased student)?
  - The Legal Office is suggesting that HRS should disallow the use of a university office as a local address and university phone as a local phone. The problem here is that many graduate students use their work email and work phone number as their student email address and student phone number. In this case what happens if a student asks that their directory information be blocked – how do we treat their employee information when it is the same as the student information?

- **Shady Grove - Per David Henry 3/5/04, EIS will finish adding 3A’s and student hourly employees before tackling Shady Grove.**

- How can we separate employment directory information for graduate assistants from their student information for access purposes? [We need to refer, once again, to the Directory Matrix and the tables re: Normal and Critical attributes. An hourly student employee who is a student will be treated like a student. A student hourly employee who is not a student will be treated as an employee.]
  - The Legal Office has confirmed that the work address, work email address and work telephone number of a graduate assistant would be considered employee directory information, not subject to FERPA requirements.
  - The Legal Office is suggesting that HRS should disallow the use of a university office as a local address and university phone as a local phone. The problem here is that many graduate students use their work email and work phone number as their student email address and student phone number. In this case what happens if a student asks that their directory...
information be blocked – how do we treat their employee information when it is the same as the student information?
### Appendix A

**PHR College Code (1st 6 digits of Unit code) Mapping to SIS College Code**

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<th>PHR College Code (1st 6 digits of Unit Code)</th>
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Appendix B
Directory Access Data Steward Agreements Regarding Outstanding Directory
Issues and Loading of 3A Institution Data into the Directory

The following proposal was developed by Steve Edwards, David Henry, John Pfeifer,
and Barbara Hope on 4/16/04 to resolve remaining access issues associated with adding
3A institutions to the Directory. 5/2004, the proposal was agreed to by the Office of the
Registrar and University Human Relations.

General

• Can OIT block all searches of the “normal” attributes of the Directory while
  still allowing anonymous on-line web searches?
  o Even if a person only had access to the web search page, a program could
    be written to query the web page one entry at a time and put the data
    retrieved into a database to produce a list of students or employees.
  o A person could scan the printed student directory, OCR the text and create
    a database of student records.
  o Because (1) the on-line web search is derived from the directory, (2) the
    current configuration is extremely complex (anonymous vs. authenticated,
    multiple institutions, FERPA, publish/no publish,
    employee/student/affiliate/combo roles), (3) performance will be
    impacted, and (4) limits have been placed on the number of return entries
    when a search is performed against the database, OIT has determined that
    the requested change to block all normal attributes cannot be made.

• Can U ID be changed from “normal” to “critical”? OIT plans to use an
  identifier other than employeenumber (U ID) as the primary identifier. This will
  take some time to develop and implement due to testing, educating application
  developers, and testing all existing applications that use the Directory. Once this
  change has been completed, U ID can be changed to “critical”.

SIS Data Subset Per Mary Ann Granger, 5/28/04, the items listed below are fine with
the additional comments/updates added in italics.

• The Office of the Registrar would like to make the following attributes
  “critical” instead of “normal”. Recommendations are listed below:
  o ou (currently dept or UG/GRAD) – keep ou “normal” because it is an
    “industry standard” attribute but do not include students status. For
    anonymous users the student records are not accessible. For authenticated
    users, attribute would contain either dept or student status (dept or
    student). Build a separate “critical” attribute to differentiate student types
    (UG, Grad, Admitted with letter).
  o umHourlyStudentEmployee – OK to move to critical
  o umNoPublishPhoto – Currently set to false for every student; this attribute
    will be removed from the Directory.
  o umStudent – OIT recommends keeping this normal. If the attribute was
    changed to “critical”, an authenticated user could determine student status
for non-FERPA students by process of elimination after looking at other flags (employee, affiliate, etc.).
  o umTermDateStudent – this attribute is not populated and will be moved to “critical”.
- For normal attributes (above) that are moved to critical, OIT is requesting that all existing Application DNs be grand-fathered, and no additional approvals will be necessary for the use of these attributes in current applications. Any new requests for Application DNs will need the approval of the data stewards for the attributes that were changed from normal to critical.
- **Publish/No publish Flags** - OIT recommends the following:
  o Set the default for publish/no publish options in SIS/TESTUDO to the “partial” option that suppresses display of address and phone.
  o The SIS source system and TESTUDO should have a pop-up box or reasonable alternative to educate users that indicating “yes” makes that information public across many sources – search of the Directory database and on-line web searches.
  o During student orientation and other appropriate venues, include wording to describe the partial publish option.
  o If an Application DN is approved for access to address and/or phone it will receive address and/or phone records for everyone in the population granted, regardless of whether or not the Publish in Directories flag was set.

The Office of the Registrar is going to leave the current Publish/No Publish flags as is; they are comfortable with the current handling of address/phone in the Directory in that they are following FERPA regarding release of such information.

**UHR** Per Kim Colbert, 5/7/04, the items listed below are fine with the additional comments/updates added in italics.
- **Create a grad assistant flag?** Directory staff can/will use the Category Status code to differentiate employee types (e.g. graduate assistants, tenured faculty, exempt employees) for Application DN requests.
- **Remove obsolete attributes (OIT will reconfirm these are not being used)**
  o umEEO6 (replaced by umEEO)
  o umEEO6code (replaced by umEEOcode)
  o umHRmailing
  o umHRmailingCode
- **Publishing Address/Phone**
  o Because some employees do want to publish their home address/phone we need to offer that option.
  o It is suggested that UHR do the following:
    - Set the default publish/no publish options in PHR and Employee Update Page to “No Permanent Address/Phone”. *The PHR default is already set to “No permanent Address/Phone”.*
    - The PHR source system and Employee Update Page should have a pop-up box or reasonable alternative to educate users that indicating “yes” makes that information public across many

- During the annual employee verification process, include wording to describe the Publish in Directories option.
  - If an Application DN is approved for access to address and/or phone it will receive address and/or phone records for everyone in the population granted, regardless of whether or not the Publish in Directories flag was set. **It is understood that if address/phone information is approved by the data steward, the Publish Indicator Flag will be applied by each application receiving this data, such that the application will NOT include, use, or store addresses/phone numbers for employees that have requested not to be published.**

- **3A institutions**
  - The purpose for including 3A institutions into the Directory is to facilitate login access to our systems (PHR; faculty grading).
  - We should keep the rules simple.
    - No other institutions can access any College Park student information (whether they authenticate or not).
    - Each institution should be offered the option to have their data accessible (i.e. we don’t make exceptions to accommodate special 3A requests) or not accessible. Partial inclusion is not an option.
  - If any other institutions decide to make their data accessible, the on-line search of the Directory will default to College Park only with check boxes available for the other institutions.
  - **OIT will maintain status quo regarding previously selected 3A units that appear in the printed directory; exceptions will not be made for additional 3A units to be added.**
  - **The on-line web search of the Directory will default to College Park such that no additional steps will be necessary for College Park users to receive the College Park only population returned with their searches.**
Appendix C

Relationship Between Email/Other OIT Services and Presence in the Directory for Terminated Employees

We keep employees in the Directory for 270 days after their separation to facilitate services, particularly for an employee who is only active one semester a year (e.g. a lecturer who only teaches every fall semester). Detailed below is information on the relationship between email and presence in the Directory for terminated employees:

All of the e-mail systems in use on campus, except the new Mail@umd system, pre-date the directory. As such, there is not a relationship between dropping out of the directory and termination of e-mail services.

- In the case of the Mail@umd system, when the individual drops out of the directory, their e-mail service terminates immediately.

- In the case of umail, when an employee leaves the university (either retires or resigns), they are dropped from the feed to umail. When that happens, they are sent an e-mail notification, which includes information about the 180-day grace period before the umail account is disabled. Since the umail database is used for “affiliates”, if the person is sponsored by a department, their umail account will continue as well as their presence in the Directory. As of 2/16/04, the umail system has not been changed to deal with the changes presented by the new Mail@umd system. As such, when a new employee or affiliate is put into the umail directory, they are eligible to get a umail account, but must activate the account in order to use it.

- In the case of accmail, the rules for termination of accounts are:
  - When the department head lets OIT (Mary Posey) know that the account is no longer needed.
  - When they are not in the directory (hard to match since after VM went away a database was not created with the SSNs and corresponding Ids).
  - When they have a non-accmail and no mail.umd.ed email forwarding address and the users indicate they no longer need an accmail account.

As of 2/17/04, there are 1399 accmail accounts (some are system accounts) and approximately 600 are forwarding to other addresses. Employees and students, if requested by the department, have accmail accounts. The administrator uses a list of separated employees to aid in the process of terminating accounts. The administrator has stopped establishing new accounts, and will soon begin urging the remaining users to move onto the new mail system. Over the next (6-9?) months, most, if not all, current users will have moved, likewise, most, if not all, generic accounts and mailing lists will also have been moved.

- In the case of WAM and Glue/Deans, the administrator disables and deletes accounts on a very regular basis each October and April. Each account is disabled
for six months before it is deleted. The administrator uses the same input data as is used to populate the directory. So, in some sense this process is related to presence in the directory, but he uses a completely separate process that has been working for as long as I can remember.

- In the case of a departmental system, like BMGT Mail, it is entirely up to the department what they elect to do. Note that in some cases, one of the justifications for running their own system, is that they get to provide accounts to whomever they choose for however long they like.

More and more systems can and will use the directory for authentication (and authorization). Examples of such services include CorporateTime, wireless access on campus, wall-jack activation, B-school web portal access, and authenticated directory search. In general, any system that uses the directory for authentication, such as those listed, access to that system will be terminated when the entry in the directory is dropped.

- In the case of CorporateTime, a job is run periodically to recover the user licenses of people no longer employed by the university in advance of their entry reaching the 270-day limit. This is done because it is *much* more difficult to remove CT access after the entry is removed from the directory. Note that dropping from the directory, whether or not we have recovered the license, will by definition remove access, since the directory is used for authentication to CT.

- As time passes, we will be constructing more processes that track presence in the directory as an indication that an account should be disabled or removed. Using the separation date for this purpose only works for faculty and staff. There is generally no indication that a student is about to drop. We will need to be sure systems for dealing with account disables can reasonably deal with this case.
Appendix D
Display of Student and/or Employee Public Information in the University Directory

Guided by business practice and/or federal and state laws, certain information about a person in the Directory (employee, student, affiliate) is considered public information. Under exceptional circumstances, lookup of a person’s data in printed Directories or with on-line public web searches of the Directory may be blocked. Listed below is additional information concerning the display of information in the University of Maryland Directory.

Employees

- Anonymous searches of the online directory include employees. Employees have the option to exclude home address, home phone, fax number, cell phone number and pager.
- For an employee of the University of Maryland, their job title, business office address, and business office phone are considered public information. This information is included in on-line Directory searches, Directory databases and printed Directories. Display and printing of home address/phone information defaults to “not publishable” in PHR unless the employee indicates otherwise.
- Under exceptional circumstances, it may be desirable to block display of an employee’s information Directory, but keep their information in the Directory to facilitate authentication and assignment of services. In such cases, the request should be made through the supervisor to University Human Resources.

Students

- Anonymous searches of the online directory do not include students. However, authenticated users can view entries for non-FERPA students only. Note: FERPA students are those students who have exercised their rights to keep all data about themselves confidential. Also, in this case, the authenticated access is user authentication and is not via an Application DN.
- Students name, local and home (permanent) address and telephone number appear in the directory and the printed student directory if they are non-FERPA students. The University of Maryland Policy on Disclosure of Student Records – Family Education Rights and Privacy Act can be found in Appendix D on p. 307 of the on-line Undergraduate Catalog: http://www.umd.edu/catalog/0405/chapter10.pdf. This policy defines “Directory Information”; however, not all defined Directory information in the policy is displayed in the University of Maryland Directory.
- The directory contains five True/False privacy flags. For students only, all the flags get the same value as determined by the SIS.PRIVACY_CODE.
  - umBuckleyFlag – A flag that indicates if the person is a student and has formally requested that no information about the student be released according to the rules set forth in the Buckley Amendment. This flag applies to students only; does not apply to employees or affiliates. Flag is set to “TRUE” when SIS.PRIVACY_CODE = "2" (Withhold ALL information).
- `umNoPublishPhone` - A flag that indicates that the person does wish for their home telephone number to be published. For students the flag is set to "TRUE" when SIS.PRIVACY_CODE is either "1" or "2" (Withhold Address and Phone or Withhold ALL information).
- `umNoPublishAddress` - A flag that indicates that the person not wish for their home address to be published. For students the flag is set to "TRUE" when SIS.PRIVACY_CODE is either "1" or "2" (Withhold Address and Phone or Withhold ALL information).
- `umNoPublishFax` - this flag does not apply to people who are only students
- `umNoPublishCell` - this flag does not apply to people who are only students
- `umNoPublishPager` - this flag does not apply to people who are only students
- Students are completely excluded from the printed student directory if their SIS.PRIVACY_CODE is either "1" or "2".
Appendix E

Logic for Populating Employee Indicators in the Directory

The codes identified below in the FAC_STAFF_CD field are used to populate the umEmployee indicators in the Directory.

Faculty Staff Code. One-character code that specifies if employee is of type: Faculty, Training, Staff, or Student. For employees with an EMERIT_STAT of "A" (Active), FAC_STAFF_CD is set to "E" (Emeritus); otherwise, FAC_STAFF_CD is based on the employee's CAT_STAT_CD, as follows:

FAC_STAFF_CD:
= "F" (Faculty) for CAT_STAT_CD = 01, 02, 03, 04, 05, 15, 25, 36, or 37
= "T" (Training) for CAT_STAT_CD = 19
= "S" (Staff) for CAT_STAT_CD = 20, 21, 22, 24, 26, 27, 31, 32, 33, 34, or 35
= "X" (Student) for CAT_STAT_CD = 14 or 16

Notes:
- For affiliate records, FAC_STAFF_CD is set to the default value of an asterisk (*).
- PHR does not have any appointments for cat stat = 05 (Fellows) because they are not paid by the University. John Pfeifer confirmed on 2/14/08 that there are no 05s in the Directory. PHR is the sole source of appointment information.

The following Boolean attributes are determined by FAC_STAFF_CD:
- umAffiliate – is TRUE if FAC_STAFF_CD = "*"
- umEmeritus - is TRUE if FAC_STAFF_CD = “E”
- umFaculty - is TRUE if FAC_STAFF_CD = “F”
- umHourlyStudentEmployee - is TRUE if FAC_STAFF_CD = “X”
- umStaff - is TRUE if FAC_STAFF_CD = “S”
- umTrainee - is TRUE if FAC_STAFF_CD = “T”