UIN Management Web Services

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Agenda

- UIN Basics
- Current State and Issues
- UIN REST API
- Roadmap
So What is a UIN?

• What does the UIN acronym stand for?
So What is a UIN?

- What does the UIN acronym stand for?
- Anyone?
- Bueller?
So What is a UIN?

• Universal Identification Number

• Managed by the TAMU System, which owns the master UIN data store

• Established in 2003
So What is a UIN?

• What is the format of a valid UIN?
So What is a UIN?

- Currently 9 digits
- Format 999009999
Who Has a UIN?

- All current and former employees
- Many students, mostly in the Brazos Valley
- Some affiliated individuals who need access to UIN-secured resources
Who Else Can Have a UIN?

• Anyone who drives past a TAMU system member campus or office!

• But seriously, anyone who is affiliated with the A&M System can have a UIN.
Let’s Give Out More UINs

• Assign a UIN to any – and every – person who accesses resources within the TAMU System.

• This includes employees, credit students, vendors, parents, continuing education students, and others
Let’s Give Out More UINs

• Roadmap Item: Implement a “confidence factor” as a UIN attribute

  • HR processor physically seeing a SS card is High

  • Self-reported First, Last, DoB, and Gender “less so”
The Rationales

• Ability to share and load to central repository

• Roadmap item: Create a data warehouse universe of all information related to UINs
The Rationales

• Business opportunity – think cross-marketing

• Many possibilities here we can’t envision now
The Rationales

• PII data security
  • E.g., eliminate use of SSN for THECB data feeds
  • Provide secure UIN/SSN crosswalk service
Historical UIN Services

• Batch UIN creation via file exchange

• UIN creation via SSO SOAP web service
UIN Batch File Exchange

• Batch UIN creation via file exchange with BPP

• Of course, BPP is going away…

• Future support is expected
SSO UIN Web Services

- UIN creation via SSO SOAP web service
- Authentication done using client passwords
- IP address restrictions
- Will be deprecated as of 8/31/2018
New UIN Web Services

• Independent set of REST web services
• UIN search
• UIN creation
• UIN update
• UIN Manager & UIN Search already use
UIN REST Web Services Technology

• New web services independent of any application

• Implemented using Microsoft .NET Web API
UIN REST Web Services Authentication

• Central repository of authorized callers

• Authentication done through HMAC encryption
Using the REST Web Services

- Applications register with TAMUS IT
- Shared secret + application ID
- HMAC algorithm
- Data “view” customization
UIN Search

• By UIN or variable search criteria

• Data returned is defined by caller’s “view”
UIN Search

• HTTP GET method

• Simple example:

  https://lab2.system.tamus.edu/test/esiservices/uiservice/api/Uin/Search/123456789
UIN Search

• Custom search is HTTP POST method

• [https://lab2.system.tamus.edu/test/esiservices/uinservice/api/Uin/Search](https://lab2.system.tamus.edu/test/esiservices/uinservice/api/Uin/Search)

• Criteria: SSN, First and Last Name, DoB
UIN Search

• XML or JSON results

• Example results:

```json
[{
  "ViewName": "WebAssignView",
  "ErrorNbr": "0",
  "ErrorMsg": "",
  "Uin": "621000626",
  "LastName": "Kessner",
  "FirstName": "Kent",
  "MiddleInit": "D",
  "Suffix": "",
  "Birthdt": "19621106",
  "Sex": "M",
  "RetMatchLevel": ""
}]
```
UIN Creation

• Create is HTTP POST method

• [https://lab2.system.tamus.edu/test/esiservices/uiservice/api/Uin/Put](https://lab2.system.tamus.edu/test/esiservices/uiservice/api/Uin/Put)
UIN Creation

• Required elements:
  • First and Last Name
  • Date of birth
  • Gender

• Optional elements
  • SSN - preferred – confidence
  • Middle initial
UIN Creation

• Again, XML or JSON results

• New UIN with no conflict

{"ViewName":"WebAssignView","ErrorNbr":"0","ErrorMsg":"","Uin":"525005314","LastName":"Public","FirstName":"John","MiddleInit":"Q","Suffix":"","Birthdt":"19700101","Sex":"M","RetMatchLevel":"99"}
UIN Creation

• Close match returns existing UIN

  • {"ViewName":"WebAssignView","ErrorNbr":"16","ErrorMsg":"Match found but confidence level is low, verify input","Uin":"525005314","LastName":"Public","FirstName":"John","MiddleInit":"Q","Suffix":"","Birthdt":"19700101","Sex":"M","RetMatchLevel":"65"}
Roadmap

• Format changes
• Data capture changes
• Central data repository
• Scope of use
UIN Format Changes

• We expect the UIN format to change to 999AA9999 in the 2019 timeframe

• No longer numeric!

• Increase the number of UINs available
Data Capture Changes

- Confidence factor - derived

- New base data elements:
  - Recording additional identity information such as driver’s license number and other documents
  - Who collected identifying information
Future Identity Data Store

• Simple taxonomy and rollup of data for all UIN-based identities

• Data governance – think keynote

• Provides a consistent way of sharing information
Future Identity Data Store

• Full view of an individuals’ relationships to the System

• Examples:
  • Employed from 1/31/2005 to present at TAMU-CC
  • Student at TAMIU from 8/2009 to 12/2014; graduated B.B.A. in Economics
Future Identity Data Store

• Read-only, supplemental data store
• Exposed via v2 of the REST API
• Change events published and consumed
Future Identity Data Store

• Informs decisions about identity and access management

• Makes no authorization claims

• Makes no access management claims – this is a local concern
Increased Use of UIN

• System Identity & Access Management (IAM) committee standardizing on the UIN as the primary identity token

• Goal: Issue UINs to all students and affiliated individuals, System-wide

• We are ready to work with interested members to start this process
The End

Questions?

To the bar…