

# OSEHRA

## **VistA Internationalization (Plan VI) - VistA4Edu DataLoader for Korean**

**Peter Li, OSEHRA**

March 26, 2019

# VistA4Edu DataLoader 2 Overview

- **Current open source repository – <http://pages.jh.edu/~vista4edu/DataLoader2/>**
- **Developed by ISI Group for use at University of Michigan School of Nursing**
- **Received permission from Johns Hopkins to update the license to Apache 2.**
- **Will publish the most recent codebase received from ISI Group including copyrights and license updates in the next couple weeks to the OSEHRA repository**

# Overview (Cont.)

- **The DataLoader 2 allows user to create patient medical records on a Excel spread sheet and import the records to VistA; however, currently, it only works for ASCII characters (need internationalization).**
- **The DataLoader is a C# application (managed code) accessing the VistA RPC via the Delphi RPC Broker (unmanaged code)**

# DataLoader Components



- **Windows C# Client – DataLoader.exe**
- **VistA M routines – Namespace: ISIIMP**  
([VISTA\\_DATALOADER\\_2\\_5.KID](#))

# Windows C# Client



- **DataLoader.exe – C# application for importing Excel document**
- **DataLoader.Common.dll – VistA data object definition**
- **VistA.DataLoader.Broker.dll - C# wrapper for the RPC Broker dll (Bapi32.dll)**

# Modifications for Korean



- **Modify BapiHelper.cs to access RPC Broker DLL (Bapi32.dll) in order to address the issue of managed <-> unmanaged Unicode data exchange**

# Send Unicode String from Managed C# to Unmanaged Delphi

## Change

```
IntPtr namePtr = (IntPtr)Marshal.StringToHGlobalAnsi(name);
```

## To

```
IntPtr namePtr = (IntPtr)Marshal.StringToHGlobalUni(name);
```

name is a **C#** string variable.

# Retrieve Unicode String From Unmanage Code

**Method: Allocate a piece of memory sufficient to hold the return Unicode data. Upon return from RPC Broker, convert data to Unicode string. Example:**

```
IntPtr valuePtr = Marshal.AllocHGlobal(1024);  
string value;
```

```
RpcbUserPropGet(this.Broker, namePtr, valuePtr);  
value = Marshal.PtrToStringUni(valuePtr);  
Marshal.FreeHGlobal(valuePtr);
```

**Allocated 65,536 bytes from typical RpcbCall for now.**



# Setup DataLoader

- Install VistA docker image – osehra/ov6
- Install [VISTA\\_DATALOADER\\_2\\_5.KID](#)
- Setup user (login user) with Secondary Menu Option: ISI DATA IMPORT
- Modify the Excel spread sheet (SS) worksheets, i.e, Vitals, Allergies, Medications, etc. to reference the known provider in VistA.
- Modify the Excel SS to use internationalized date format, i.e., YYYY-MM-DD

# DataLoader Demo

