



# Why Technical Document Changes are Important

State Agency Perspective



# State Perspective

- ▶ Be involved!
- ▶ When changes are made/required, they can affect both your MIS and EBT host/processor
  - ▶ We (State agencies) need to understand the potential impacts
  - ▶ i.e. proposed change to transition to JSON files could affect:
    - ▶ clinic interface files with the EBT system
    - ▶ flat files (UPC/PLU file, Vendor file, Vendor Adjustment files and maybe the Redemption file)
- ▶ Usually requires a change idea (for one or both systems)
  - ▶ Can be costly – cost sharing across states important for MPSC
  - ▶ Can take significant time to implement, depending on the change process
  - ▶ Can be difficult to accommodate the change in both systems simultaneously



# State Perspective

- ▶ Submitted Change Requests
  - ▶ Consider impact to others (retailers and states)
  - ▶ TIG clarifications - benefits retailers and states (V4)
  - ▶ TIG updates to include missing offline specifications
    - ▶ State workgroup
    - ▶ Retailers not impacted-already in line with previous requirements
  - ▶ Item level discounts - benefits retailers
  - ▶ CVB subcategory straddle - benefits participants
  - ▶ CVB discount for participants - benefits participants



# State Perspective

- ▶ Other important initiatives:
  - ▶ PLU Workgroup
    - ▶ Standardize where possible and provide “best practices”
    - ▶ Benefits retailers and participants
  - ▶ Offline Certification Workgroup
    - ▶ Standardize processes
    - ▶ Benefits retailers and states



# WUMEI Update



# Background

- ▶ In general, it is common that systems must “talk” to each other
  - ▶ Systems talk using an “interface”
- ▶ In particular, WIC MIS’s and WIC EBT systems need to communicate
  - ▶ Some general examples (note that there may be exceptions)
    - ▶ WIC EBT system needs to know about benefits issued to households
    - ▶ WIC EBT system needs to know about authorized vendors
    - ▶ WIC MIS needs to know about redemptions processed by the WIC EBT system



So, what is the WUMEI?

➤ WIC Universal MIS-EBT Interface (WUMEI)

- Functional description for what data is to be exchanged between WIC MIS and WIC EBT systems

# Why should you care?

- ▶ Systems that must support multiple interfaces are more complex to maintain
  - ▶ More code
  - ▶ More chance for error
  - ▶ Increased test effort
  - ▶ All of this means...







# Brief History



- ▶ In the beginning, there was Wyoming (which ran the WIC MIS) and Stored Value Systems (SVS) which ran the first WIC EBT smart card system – they had to talk
  - ▶ Next came Nevada and, briefly, Ohio
    - ▶ Used the same interface
- ▶ Then Texas came with a system where WIC EBT processing was integrated into the WIC MIS – therefore, no need for an interface
  - ▶ New Mexico followed closely with a similar model




# Brief History, continued

- ▶ Next was Washington with a demonstration project for online – the interface was different from the SVS smart card interface
- ▶ Around this time Michigan started online WIC with JPMorgan – this was a different interface as well
  - ▶ When Xerox took over, they had to conform to the JPMorgan interface
- ▶ SVS exited the WIC EBT business meaning that Wyoming and Nevada needed to find a new processor
  - ▶ Nevada converted to online with JPMorgan and had to convert to JPMorgan's format
  - ▶ Wyoming engaged Paul Jaeger and Associates (PJA) and they changed formats
    - ▶ When Wyoming converted their WIC MIS to MPSC, MPSC had to mimic the PJA interface



# Brief History, Continued

- ▶ Next was Kentucky online WIC EBT
  - ▶ Even though one company, CDP, ran both the WIC MIS and WIC EBT system, the systems were treated as being separate
    - ▶ Kentucky used yet a new interface – however, it was based on Simple Object Access Protocol (SOAP) and eXtensible Markup Language (XML) which was, at the time, a modern method for system to system communication
  - ▶ During this project, CDP and Maximus (who was QA on the Kentucky WIC project) pitched the idea of developing a standard interface – thus the WUMEI was born!




# (Abridged) Evolution

| <b>Version</b>  | <b>Date Effective</b> | <b>Details</b>  |
|-----------------|-----------------------|---|
| 0.08            | 2/3/2009              | Initial revision for external review.   |
| 1.4             | 10/20/2009            | Updated with FNS comments – NWA release   |
| 1.6             | 11/23/2010            | Updated with comments on v1.5. Version for review by public.  |
| 2.0, 2.1        | 4/24/2011             | Updated and re-organized based on comments on Version 1.6 and from March 15, 2011 meeting in Virginia.  |
| 4.0             | 8/25/2011             | Updated with changes agreed upon in weekly conference calls discussing the data elements used in each function and resolution of open issues from March 15, 2011 meeting in Virginia. |
| Version 1       | June 2012             | Published 2012 version  |
| Version 3 draft | November 2014         | Second draft of 2014 version reflecting the resolution of further Change Requests submitted and the comments received on the June 2014 draft.   |
| Final           | March 2015            | Reflects resolution of comments received on November 2014 draft.  |



# Trouble in Paradise

- ▶ At its core, the WUMEI is a functional specification that specifies “what” data systems need to exchange without the details of “how”
  - ▶ Leaves latitude for interpretation and variation in implementation
  - ▶ Not truly plug ‘n play
  - ▶ While it is better than nothing, there is still considerable work (and cost) involved in getting systems to talk to each other (even if they have implemented a version of the interface with another partner)
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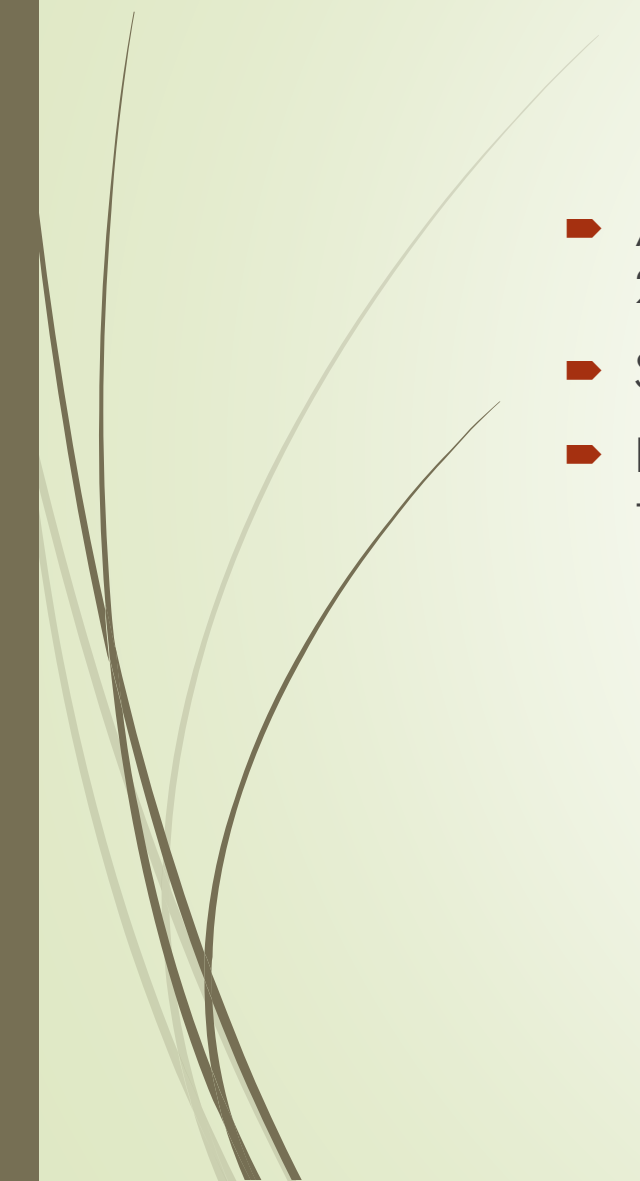


# Meanwhile...

- ▶ Technology has evolved
- ▶ SOAP and XML are “old school”
- ▶ Representational State Transfer (REST) and JavaScript Object Notation (JSON) are now preferred
  - ▶ Been around for a while
  - ▶ Lighter weight
  - ▶ More familiar to “kids out of college”



# Continuing evolution

- ▶ A number of comments and change requests were logged against the 2015 version
  - ▶ Slow progress in addressing change on monthly calls
  - ▶ In 2017, the FNS, industry stakeholders, and some states decided it was time to take the “next step”
    - ▶ i.e. develop a “standard” rather than a “guideline”
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# The WSDL Workgroup

- ▶ A new smaller workgroup was formed
- ▶ Composed of representatives from:
  - ▶ Industry
  - ▶ States
  - ▶ FNS
- ▶ The goal was to develop a technical specification based on SOAP/XML
  - ▶ WSDL stands for Web Services Description Language and is used with SOAP technology



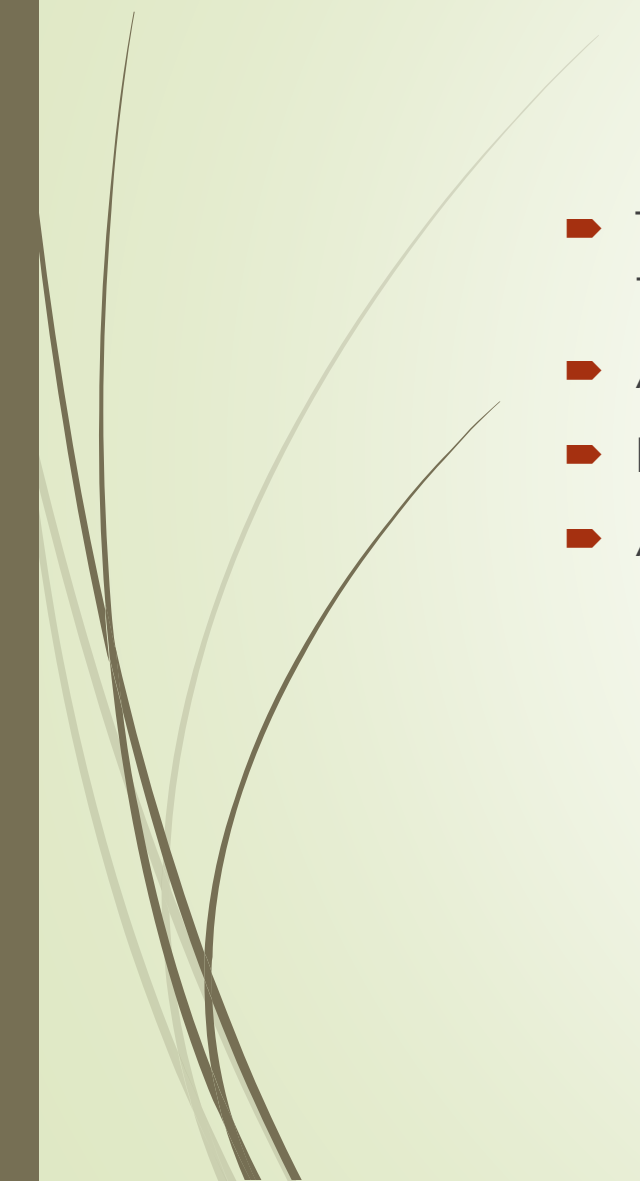


# But wait, there's more!

- ▶ In one of the first couple of calls, someone suggested “hey, if we are going through this trouble, then let's just go ahead and get on updated technology – REST/JSON”
- ▶ The group quickly agreed (which is a bit unbelievable if you know how consensus driven workgroups work)
- ▶ Furthermore, Florida agreed to be a guinea pig for a “reference implementation”
  - ▶ In other words, the WIC MIS and WIC EBT teams agreed to build a real implementation that could be mimicked by others



# Fast forward two years...

- ▶ The WSDL workgroup is still meeting monthly (yes, we kept the name from the older technology)
  - ▶ Almost finished (probably 2-3 more meetings)
  - ▶ Florida is running with the new interface
  - ▶ All information will be made available to everyone for review
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# It's about more than technology...

- ▶ There are a whole boatload (that is a technical term) of changes that fall into various categories:
  - ▶ Editorial changes (i.e. cleanup of typos and formatting)
  - ▶ Elimination of unnecessary fields
  - ▶ Clarification of business rules
  - ▶ Narrowing down functional differences in interpretation
  - ▶ Removal of items that belong elsewhere (such as the Operating Rules)
  - ▶ Enhancing implementation guidance
  - ▶ Data organization changes (i.e. adding more structure)
  - ▶ Referencing other standards where they exist



# (Incomplete) list of functional changes

- Improvements to eliminate duplicate benefit issuance
- APL type
- Add NTE at time of transaction to transaction record



# What's next?

- ▶ The group will finish the document
  - ▶ The FNS will post the information to PartnerWeb for review and comment
  - ▶ Changes will likely continue, but hopefully at a slower rate
  - ▶ The Florida implementation has already shown us that it is hard to think of everything
  - ▶ The goal is to get everyone closer to “plug ‘n play” and improve compatibility between systems
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