PROGRESS REPORT: TOWARD AN INTERNATIONAL ADDRESSING STANDARD

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NEED FOR AN ADDRESSING STANDARD: DOMESTIC ISSUES

- Storing addresses in block format means information loss
- Addresses are parsed repeatedly and redundantly
- USPS CASS certified software packages differ at times
- The ZIP+4 code has varying levels of precision
- Postal discounts are given in some cases for incomplete and incorrect addresses
- This situation may be remedied through USPS product redesign by differentiated levels of postal discounts
- Business and academic addresses have more lines than can be imaged using much existing technology
- Lack of address standardization lowers delivery rates

NEED FOR AN ADDRESSING STANDARD: INTERNATIONAL ISSUES

- International addresses have more lines and longer lines than can be imaged using much existing technology
- International addresses are difficult to parse correctly
- Storing addresses in block format means information loss
- Addresses are parsed repeatedly and redundantly
- Address elements vary from country to country
- International coding rates vary from 90% to 80% or less
- Lack of address standardization lowers delivery rates
- Cost of international postage intensifies these problems

PRIOR EFFORTS AT INTERNATIONAL ADDRESS STANDARDIZATION

- Universal Postal Union (UPU) Standards Board had not developed standards in this area
- ISO has a standard that lacks sufficient rigor and precision
- European CEN TC 331 proposal includes a three stage development process: elements, printing rules, and transmission formats
- DISA EDI/X12 Transaction Set 101 offers an option for permanent parsing for domestic addresses
- E-commerce formats are generally line-by-line based, either with or without line identifiers

UNIVERSAL POSTAL UNION DIRECT MAIL ADVISORY BOARD

- Organized 1995 after Tom Leavey of USPS became UPU Director General
- Members are Posts, associations such as DMA and PostCom, and firms such as Group 1 and Pitney Bowes
- Work is funded by membership dues and contributions
- Members participate as observers in other UPU activities such as Standards Board and POST*Code project
- Has Address Management, Products and Pricing, and Quality of Service project teams

UPU DMAB ADDRESS MANAGEMENT PROJECT TEAM GOALS

- Support development of databases of delivery points to allow mailers to validate and correct address lists
- Support development of change of address systems and procedures, with consideration of privacy issues
- Foster development and use of standardized formats and techniques for the collection, dissemination, and maintenance of international addresses
- Develop a detailed database of address management capabilities by country
- Evaluate best practices and develop a list of recommended procedures

UPU POST*CODE PROJECT

- Began work in 1998
- Has produced Universal POST*Code database
- Data available from all 189 UPU members
- Common data format used throughout the product
- Reasonable subscription price
- Variable rates dependent on geographic scope and type of use intended
- UPU contact is Guy Goudet at +41 31 350 31 56

UPU POST*CODE PROJECT
UNIVERSAL POST*CODE DATABASE

- Some countries have data on localities only
- Some have localities and associated postcodes
- Some have localities, districts, and associated postcodes
- Some have localities, streets and associated postcodes
- In this last group, some have supplemental conditions and additional fees may be required
- Specific delivery point data is not available through the POST*Code database
- Updates to data are made on a quarterly basis
- Documentation of typical address formats is included

RELATION OF DATABASE TO AN INTERNATIONAL ADDRESSING STANDARD

- Database allows for validation of address elements
- Common format of database provides needed address element definitions
- Inclusion of typical address formats is very useful
- Addressing standard must also cover names
- Addressing standard also covers transmission of data through EDI and XML
- Also covered is the final rendition on mailpiece

TWO RESOLUTIONS FROM UPU STANDARDS BOARD

- Two resolutions passed in January, 2001
- Assigned Status P for proposed work
- First resolution calls for codifying address elements and their placement in templates by country
- Second resolution for EDI and XML messages for transmission of data and rendition instructions for final presentation on mailpiece
- First resolution sponsored by POST*Code project
- Second resolution sponsored by USPS and UPU Direct Mail Advisory Board

BUSINESS BENEFITS OF NEW STANDARD

- Improved domestic and international coding rates
- Better identification of potential undeliverables
- Better identification of duplicate addresses
- Ability to manage acquisition and exchange of missing elements
- Ability to determine completeness of addresses
- Late kills, early adds, move updates--cut cycle time
- Use with GCA Mail.dat to split and combine mailings
- Reduce postage utilizing upcoming USPS product redesign

FURTHER BUSINESS BENEFITS OF NEW STANDARD

- Manage constant and variable message inserts
- Add variable content into a publication
- Manage correlation of graphics files with text messages
- Delay generation of final ink jet formats
- Link multiple addresses for same entity
- Can support hybrid distribution systems
- EDI version supports management of file updates
- XML version with UNICODE support handles all alphabets in a single file format

IDEAlliance APPROACH

- Participate in all known efforts working toward an international address standard
- Promote interoperability of address elements and templates
- Support XML for internationalization
- Concentrate on postal addressing and work with the Posts
- Focus on North America and link up with other regions
- Support a comprehensive approach to mailing production
- Support interoperability with IDEAlliance Mail.dat database standard for bulk mailings

IDEAlliance Mail.Dat

- Outgrowth of earlier GCA Container Summary File
- Designed to include all variables for business mailings in a relational database format, except the names and addresses
- Published in 1995 and updated thereafter
- Supports distribution planning and drop shipping
- Adopted by the USPS for electronic communication through the PostalOne! program
- Direct support for electronic postage payment
- For information contact Georgia Volakis of IDEAlliance at 703-837-1075 or gvolakis@idealliance.org

BASIC APPROACH OF ADDRESS ELEMENT TECHNOLOGY

- The address is not the same as the address label
- The address is a structure of elements
- Elements are the smallest meaningful parts of addresses
- Addresses in each country can be classified in terms of one or more templates
- Templates are orderings or sequences of address elements
- The label is merely one rendition of the address
- Rendition instructions can make the presentation consistent and repeatable
- The label must preserve address deliverability even when address space is limited

TECHNOLOGICAL LEVELS - RELATIONAL DB, EDI, XML

- Relational DB level with data dictionary and XML DTD incorporated in IDEAlliance ADIS 2001-1
- ADIS 2001-1 includes rendition instructions
- DISA EDI/X12 Transaction Set 101 Is in Use
- UN/EDIFACT PROLST is a Message In Development
- XML level provides a Document Type Definition (DTD) for organizing address elements
- XML formats for addresses also developed by OASIS and various proprietary efforts
- ebXML and UBL seek to define full business vocabularies

TECHNOLOGICAL LEVELS - RELATIONAL DB

- Separate data tables for each type of information
- Name and address tables, message data tables, tables of templates and rendition instructions
- Combines with IDEAlliance Mail.dat for bulk mailings
- Form a complete representation of all mailing data
- Enables combining and dividing of parts of mailings
- Well established software and development paradigm
- Mailer companies are familiar with this approach
- International standards bodies do not find it rigorous

TECHNOLOGICAL LEVELS - EDI

- DISA EDI/X12 Transaction Set 101 has both element based and identified line formats
- UN/EDIFACT PROLST is a Message In Development
- EDI formats generally utilize reusable segments
- EDI requires data validation upon receipt
- EDI processes are designed for unified outcomes
- Most EDI processes have cumbersome updating procedures
- PROLST gets around this by externalizing elements
- EDI organizations worldwide are trying to move to XML

TECHNOLOGICAL LEVELS - XML

- XML level provides a Document Type Definition (DTD) for organizing address elements
- XML incorporates UNICODE and supports many alphabets
- XSLT provides for reference implementations within XML
- XML schemas offer strong data typing
- Some XML schema approaches support object oriented design
- XML based standards processes support quicker updating
- A variety of XML approaches continue to appear
- This raises an issue of multiple distinct implementations

TEMPLATES

- Address instances reflect basic patterns
- Some basic patterns are applicable to many countries
- Country based templates are being defined
- Language of presentation must be specified
- A template can be thought of as a sequential ordering of lines and elements
- Address format varies if mailing is internal vs. external
- Usable for single country applications without external knowledge
- Templates need to support variations in formats
  - One way is to support conditional logic
  - Another way is to allow subtemplates

RENDITION INSTRUCTIONS

- Address presentation is a key facet of address quality
- Address element technology needs to incorporate a consistent and systematic approach to rendition
- Economics and aesthetics drive the tendency for address labels to be undersized in relation to address data
- Address elements and mail production elements are both present together on mailing labels
- For direct mail applications, personalized messages may also be imaged and need to fit into available space
- Postal services incur additional costs as a result of suboptimal address presentation

RENDITION INSTRUCTIONS (continued)

- Various types of operations need to be supported:
  - Abbreviation eligibility, table-based and customized
  - Initial substitution eligibility
  - Language based techniques to reduce identifier length
  - Noise table to eliminate less significant components
  - Combining and dividing of various address lines
  - Elimination of elements when not essential
  - Left and right justification of address and mail production elements
  - Prioritization and single-stepping of all the above operations
  - Truncation and unwanted elimination only as a last resort
- Rendition quality measurement possible if inputs validated
- Rendition quality measurement adds value for the Posts

CURRENT STATUS

- DISA EDI/X12 TS101 now supports templates and rendition instructions
- PROLST received Message In Development status at UN/EDIFACT in 2000
- Electronic Commerce Code Management Association (ECCMA) manages International Address Element Codes (IAEC)
- GCA ADIS relational DB model published in 2001 with XML DTD and rendition instructions
- UPU Standards Board passed two resolutions at Status P in January 2001 covering elements, templates, rendition

CURRENT STATUS (continued)

- UPU POST*Code Group has issued Universal POST*Code Database
- European CEN TC 331 work on address elements to be followed by country based printing rules/templates
- OASIS Customer Information Quality (CIQ) Technical Committee (TC) has issued its extensible Name and Address Language (xNAL) standard
- IDEAlliance will work with OASIS on interoperability, internationalization, and XML schema technologies

NEXT STEPS

- CEN TC 331 to define printing rules/templates for European countries
- ADIS software for rendition instructions to debut at Spring 2002 IDEAlliance Addressing/Distribution conference
- USPS NCSC International Address Template Working Group will help define further steps in address element technology
- Proposed Postal Address Template Description Language (PATDL) seeks to unify different representations of elements, templates, and rendition instructions