

# Trilateral Data Exchange Standards

## Task No. 11

### Report to WIPO SCIT Plenary



February 1, 1999

# Objectives

- Describe data exchange requirements
- Identify standards and technology being evaluated for Trilateral use
- Explain the pilot use of these standards for International Priority Document Exchange

# Document Exchange Requirements

- Combine & manage multi-file documents
- Originator Authentication
- Document Certification
- Confidentiality
- Use Open Standards based solutions

# Document Exchange Requirements (cont.)

- Batch exchange for requested document sets
- Provide fast delivery of individual documents to authorized parties
- Use commercial solutions for transportable media and on-line exchange

# Document Exchange Standards and Technology

- Multi-file document transfer standard
  - **SGML Document Interchange Format (SDIF)**
  - **Open Standard, ISO 9096**
  - **Describes a method to “wrap” the components of a multi-file document for electronic delivery**
  - **SDIF works for:**
    - **TIFF or ST.33 files (document images)**
    - **SGML or XML (character coded files)**

# Document Exchange Standards and Technology

- Multi-file document transfer pilot work (SDIF)
  - **JPO** has developed **SDIF Wrapper/Unwrapper** software for **UNIX** environment
  - **USPTO** ported **SDIF Wrapper/Unwrapper** to **WinNT**

# Document Exchange Standards and Technology

- Multi-file documents transfer DTDs
  - Document Type Definitions (DTDs) define electronic shipping documents for Priority Documents
  - File naming and directory structure conventions have been developed for electronic priority documents
  - Electronic shipping documents can wrap other types of compound electronic documents

# Document Exchange Standards and Technology

- **Originator Authentication**
  - **Trilateral Partner digital certificates follow ITU Recommendation X.509**
  - **Trilateral Offices are studying PKI interoperability**
  - **Priority document exchange tests are using Netscape certificates**
  - **USPTO is evaluating an Entrust Technologies PKI solution**



# Document Exchange Standards and Technology

- Document Certification
  - **Trilateral Partners will use digital signatures to certify electronic documents**
  - **Priority document pilot project will study hash and signature encryption algorithms**
  - **128 bits key length has been selected**
  - **Public Key Cryptography Standard #7 Signed Data has been selected for signed document encapsulation**

# Document Exchange Standards and Technology

- Confidentiality
  - Agreement on use of strong encryption (128 bits keylength)
  - Priority document exchange project will investigate data encryption algorithms
  - PKCS#7 signed data (digital envelope) has been selected
  - USPTO developed signing and encrypting software using a commercial Cryptographic Toolkit

# Document Exchange Standards and Technology

- Batch Exchange of Requested Document
  - JPO/EPO Push protocol uses standard messages to:
    - request a list of documents,
    - transmit SDIF documents,
    - acknowledge receiving documents and
    - report the status of processing SDIF files
  - Push protocol exchange will be tested between EPO and JPO

# Document Exchange Standards and Technology

- **Fast delivery of individual documents**
  - **Trilateral Partners will study individual document Pull exchange during 1999**
  - **Documents will be in the same format used for the Push mechanism**
  - **PKI interoperability would allow document envelopes to be addressed to individual certificate holders**
  - **Documents would be sent as quickly as practical (<24 hrs.)**

# Document Exchange Standards and Technology

- **Media and Transmission Channel Compatibility**
  - **CD-R transportable media are based on existing standards**
  - **Virtual Private Network (VPN) currently uses proprietary technology**
  - **VPN should convert to an industry standard (IPSEC?) when one becomes available**
  - **TCP/IP (Internet) networking standards allow network to evolve with technology**

# Conclusion

- Trilateral lessons learned can guide future WIPO exchange standards
- Future standards can follow evolving Internet practices for electronic commerce
- Benefits:
  - reduced dependence on standards that are unique to the patent business
  - increased use of commercial-off-the-shelf products
  - lower life-cycle costs