InterPARES 3 Project
International Research on Permanent Authentic Records in Electronic Systems

Certified e-Document Authority (CeDA)

Kuching, Malaysia, June 18, 2011

Eun G. Park

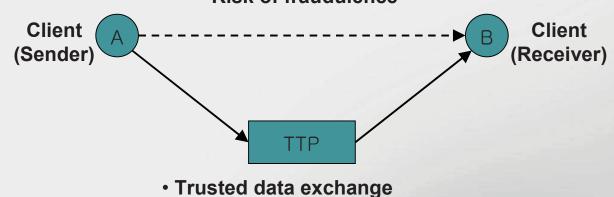**McGill University**
School of Information Studies

Agenda

- InterPARES 3 Project Team Korea Case Study

- Basics of trusted 3rd party digital repositories

  - Concept, features, and background

- Data collection and analysis

- Types and roles of trusted 3rd party digital repositories

- CeDA in Korea
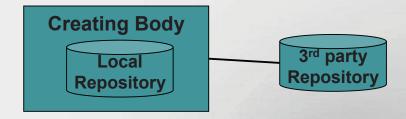
- Issues and further questions

Overview

◆ What is '<u>Trusted Third Party</u> Digital Repository' ?

◆ Trusted Third Party (TTP)
  - An authority that acts as an intermediary between participating parties for trustworthy interactions between the parties
  - A trusted third party authority that is trusted by both parties (A and B)
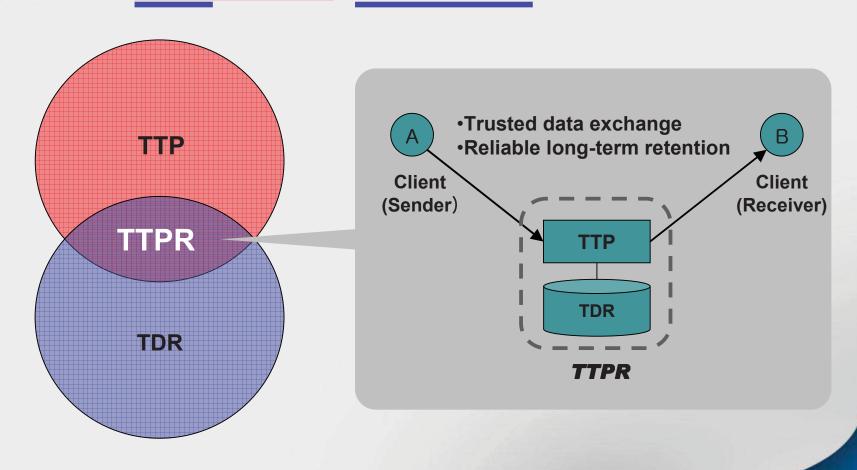
• Risk of fraudulence

**Client
(Sender)** (A) ----------------------→ (B) **Client
(Receiver)**

[TTP]

• Trusted data exchange

Overview

◆ What is 'Trusted Third Party Digital Repository' ?

◆ Trusted Digital Repository (TDR)

➤ "A trusted digital repository provides reliable, long-term access to managed digital resources to its designated community, now and in the future." (OCLC/RLG, 2002, p. 5)

- Take responsibility for the long-term maintenance of digital documents
- Demonstrate fiscal responsibility and sustainability
- Design its system in accordance with standards
- Establish methodologies for system evaluation
- Prepare policies, practices, performances that can be audited and measured
- Can be either local repository or third-party repository

Creating Body

Local Repository

3rd party Repository

Overview

◆ What is 'Trusted Third Party Digital Repository' ? (TTPR)

Background of trusted 3rd party digital repositories

Industry

- Ensuring e-documents' reliability and authenticity;
- Building trust between e-document exchange parties;
- Promoting e-business and improving business efficiency and speed.

Legal

- Resolving relevant laws and regulations into unified requirements in dealing with e-documents;
- Offering legal and procedural standards in establishing digital repository;
- Endowing digitized (scanned) documents with legal authority.

Technical

- Based on the development of security and preservation technologies;
- Supporting electronic document exchange and sharing.

Data collection: Interview

1. Interviews with 3 groups of professionals:

   ➤ Records creators

   ➤ Records managers

   ➤ (Records users)

   ▪ Interview questionnaire: drawn from InterPARES 3

   ➤ Records questions

   ➤ System questions

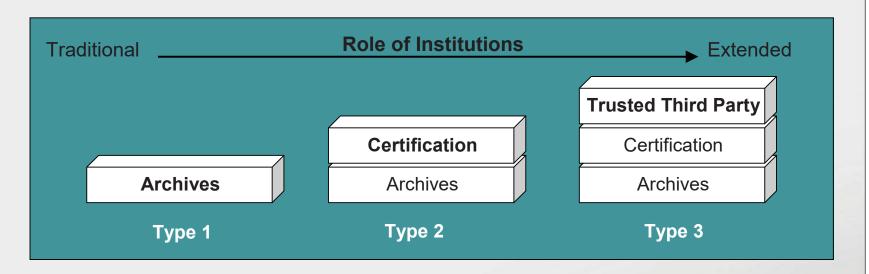   ➤ Policy questions

Data collection: Supporting documents

2. Relevant Documents

➤ Institution's mission statement and annual reports;

➤ Publicly available documents that related to the system;

- System manuals;
- User guides.

➤ Other written materials generated by the institution;

- Newsletters, monthly reports, special reports, statistical forms, meeting agendas, and planning documents of the institution.

➤ Additional comments made by the interviewee

Types of trusted 3rd party digital repositories

◆ **By Major Role**

Traditional   **Role of Institutions**   Extended

Trusted Third Party

Certification

Archives

Certification

Archives
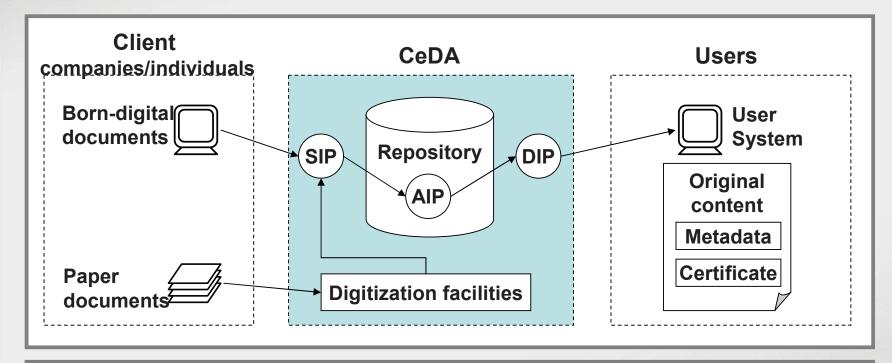
Archives

Type 1   **Type 2**   **Type 3**

- Type 1: Archives retaining and preserving e-documents (e.g. US Iron Mt., Spain)
- Type 2: Archives + Certification or Notarization of e-documents (e.g. US, Japan)
- Type 3: Archives + Certification + Trusted Third Party (e.g. Korea)

Governance of CeDA in Korea

Ministry of Knowledge Economy	• Establishing acts, notices and regulations; • Supervising KIEC's activities; • Authorizing the CeDA.
National IT Industry Promotion Agency (NIPA)	• Evaluating potential candidates for the CeDA; • Setting up technical standards and guidelines.
Private Service Provider (CeDA)	• Archiving e-documents; • Exchanging secure e-documents; • Certificating the retained e-documents.
Client	• Private businesses; • Individuals.

Overview of CeDA

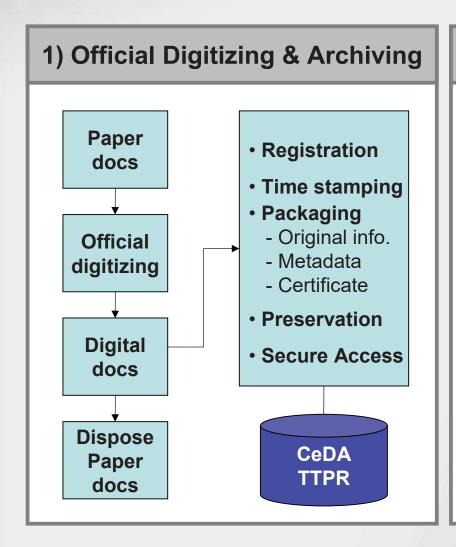**Official repository that ensures e-document's reliability**

 1) Preserving born-digital and born-again digital documents;

   - Ensuring legal authority of all retained documents;

 2) Certifying the lifecycle of e-documents; and

 3) Being as an Intermediary for secure e-document exchange between parties.

Services of CeDA

1) Official Digizing & Archiving

Paper docs

↓

Official digitizing

↓

Digital docs

↓

Dispose Paper docs

- **Registration**
- **Time stamping**
- **Packaging**
  - Original info.
  - Metadata
  - Certificate
- **Preservation**
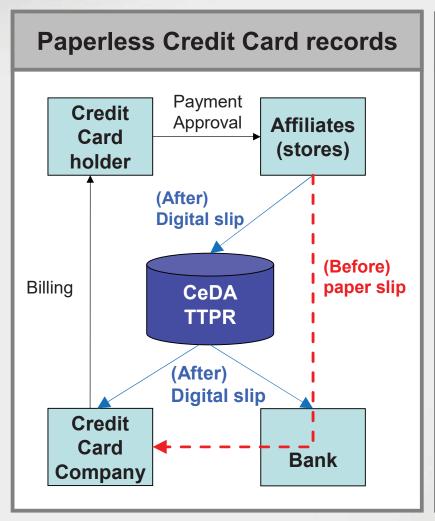- **Secure Access**

CeDA TTPR

2) Issuing Certificate

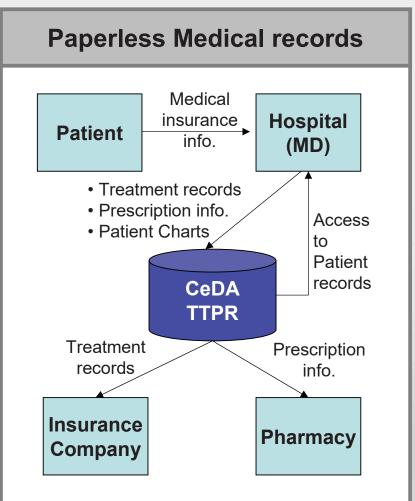**Validation of the fact that CeDA retains authentic docs**

Certificate of digital docs
- Creator information
- Registration information
- Authenticity information
- Access history

Validation on the issued certificates

Paperless Credit Card records

Credit Card holder → **Payment Approval** → Affiliates (stores)

(After) Digital slip

Billing

CeDA TTPR

(Before) paper slip

(After) Digital slip

Credit Card Company

Bank

Paperless Medical records

Patient → **Medical insurance info.** → Hospital (MD)

• Treatment records
• Prescription info.
• Patient Charts

Access to Patient records

CeDA TTPR

Treatment records

Prescription info.

Insurance Company

Pharmacy

Issues

- Repositories may vary in their major services and governing body, depending on the context of each country.

- Each repository seems to have some ways to ensure authenticity, reliability and integrity of electronic documents by establishing:

  - legal requirements;

  - technical specifications; and

  - operational procedures.

- Value of TTPR

  - Being a feasible solution for organizations without sufficient capabilities of digital information management;

  - Enabling to build national infrastructure in various industries for digital collaboration based on trusted relationship between participants