A Study on Electronic Bidding System

July 8, 2016

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Contents (Electronic Bidding)

- Introduction
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Introduction
Introduction (About JACIC)

- Japan Construction Information Center (JACIC)
- General Foundation (Apr. 2012)
- Purpose:
  - Support Facilitation of Public Procurement Japanese Government promote with ICT technology

JACIC
Akasaka, Minato-ku, Tokyo, JAPAN
Introduction (Business of JACIC)

- Improve productivity for construction sector with construction information system
- Support Government and Local Government
- Information sharing
- Cooperate with Industry, government and academia
- Promotion of innovation through ITC technology
- Promotion of academic technology
Introduction (Business of JACIC)

- Construction by-products
  - Soil generated

- Cost Estimation

- Construction Information System

- CIM
  - Construction Information Modeling/Management

- CORINS/TECRIS

- Improvement of productivity for Construction sector

- Standardization

- E-Bidding Procurement Information

**Figure:** model diagram of JACIC business
Introduction (Background of E-bidding)

- Basic Concept of Construction CALS* Development (Construction Ministry, Apr. 1996)
- Act for Promoting Proper Tendering and Contracting for Public Works (Nov. 2000)
- E-Japan Strategy (Jan. 2001)

* CALS:
  ⇒ Continuous Acquisition and Life-Cycle Support(1993)
  ⇒ Commerce At Light Speed(1997)
Introduction (Background of E-bidding)

- CALS/EC Local Promotion Action Program (MLIT, Jun. 2001)
- E-Bidding System of MLIT was published at no charge (MLIT, Jun. 2001)

* MLIT: Ministry of Land, Infrastructure, Transport and Tourism
Introduction (good point of e-bidding)

- Make bidding-process effective
- Reduce costs of purchaser and supplier
- Increase competitiveness and transparency
- Increase bidding opportunities
Method for introduction of e-bidding
Method

- Establish “Electronic Bidding Core System* Development Consortium”
- Develop “Electronic Bidding Core System” (EBCS)
- Support Core System Users

* Core System: Name of Package Software which JACIC developed
Method (Consortium)

Electronic Bidding Core System Development Consortium (JACIC, Jul. 2001)

Purpose

- Support small purchasers* for smooth introduction of e-bidding system
- Consider specifications of EBCS
- Consider how to increase market-share of EBCS

* Local Government, Public Company, etc.
Method (Consortium)

Activities of Consortium

- Consider specifications of EBCS
- Validate EBCS
- Consider how to increase market-share of EBCS

Development of Software

- Based on considerations of consortium, JACIC and SCOPE* carry out design and development of EBCS

* SCOPE: General Foundation Service Center of Port Engineering
Method (Consortium)

- Members (Jun. 2016)
  - Full Member (IT Vendor, 5 Co.)
  - Supporting Member (IT Vendor, construction consultancy company, Certificate Authority, 17 Co.)
  - Special Member (Public Organization, 240 Org.)
Method (Consortium)

- Full / Support member
- JACIC/SCOPE
- Knowledge human-resources Membership fee
- Secretariat
- Design Development (JACIC/SCOPE)
- EBCS User (Government, Local Government, Small Cities, Public Companies)
- Special member

Figure: Relationship of EBCS Development Consortium
Method (EBCS)

Electronic Bidding Core System (EBCS)

- Package Software for e-bidding system which JACIC and SCOPE has developed
- Base on specifications of MLIT* e-bidding system
- Provide versatile functions for adapting any Public Purchasers (easy to customize)
- Provide internet function, (e.g. registration of ordering project, notice of winning bidder)
- Secure safety and reliability with PKI* which government provide

*MLIT: Ministry of Land, Infrastructure, Transport and Tourism
**PKI: Public Key Infrastructure
Method (EBCS)

- **e-bidding system for practical use**
  - each public purchaser have to build e-bidding system individually for practical use

\[
\text{E-bidding system} = \text{EBCS (binary)} + \text{Individual Customization (Customizable section)} + \text{Hardware, Middleware, Helpdesk, etc.}
\]
Method (EBCS)

Private Certificate Authorities

GPKI, LGPKI

public purchaser

Project Registration
Qualification Evaluation Notice information

ministry

middleware (Web Server, AP Server, DB Server)

public company

Supplier

E-bidding server

OS (UNIX, Windows, etc.)

Hardware (Server, Network, etc.)

middleware (Web Server, AP Server, DB Server)

public purchaser

Project Registration
Qualification Evaluation Notice information

Software (Java)

Supplier

Consultant

Vendor

i-PPI*: Integrated Public works Procurement Information service (JACIC)
Method (EBCS Version)

- Version 1 (Jun. 2002)
- Version 3 (Jun. 2003)
- Version 4.2 (Jul. 2006)
- Version 5 (Jul. 2007)
- Version 5.1 (May. 2009)
- Version 5.2 (Jul. 2012)
- Version 5.3 (Jul. 2013)
- Version 6 (Mar. 2016)
Method (User Support)

- Highly Public Organizations
  - Ministry
  - Local Government
  - Public Corporation
  - Motorway company
  - Cooperative Association
  - Railway company,
  - private universities
  - public highly ordering institutions such as hospitals
Method (User Support)

- Single Use
- Shared Use
  - Prefecture Initiative
  - Council of small cities
- On-Premises
- ASP/Cloud
Method (User Support)

- User and Special Member Conference (Annually)
- Regional User Conference (Annually)

- Service Center (Inquiry service by e-mail, Provision of information by the website)
Conclusion
Result (Increase of EBCS Users)

Total 782 Org. (Mar. 2015)

- Small city: 678/1721
- Large city: 19/20 (95%)
- Prefectures: 46/47 (98%)

JACIC examined. It includes the organization in the development and in preparation.

- Central ministries
- Ordinance-designated city
- Public corporations and organizations
- Ordinance-designated city (share use)
- Prefectures
- Other municipalities (share use)
Conclusion

- Adoption of Many organization
- Sufficient features and performance
- User hearing and feedback system

JACIC considers this project has been successful
Future Works
Future Works

- Improvement of EBCS feature in accordance with change of Social Situation
- Improvement of Structure of EBCS system in accordance with IT Environment
- Expansion of e-bidding to small cities
Thank You Very Much for Your Listening.