

# Study of a paperless information system for effective construction production systems

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# Outline

1. Introduction of JACIC
2. Needs, try and error
3. Current situation

# 1 .Introduction of JACIC

Japan Construction Information Center

- Founded:  
November 1985
- The aim of the organization:  
Promote the application of information and communication technology for the construction projects.
- Employee & Branch:  
94 employees, Tokyo headquarter and 8 local offices in Japan
- Income:  
US\$37.5 M(4.5billion JPY 2015.3)  
Rate 1 USD = 120 JPY

## 2. Needs, try and error

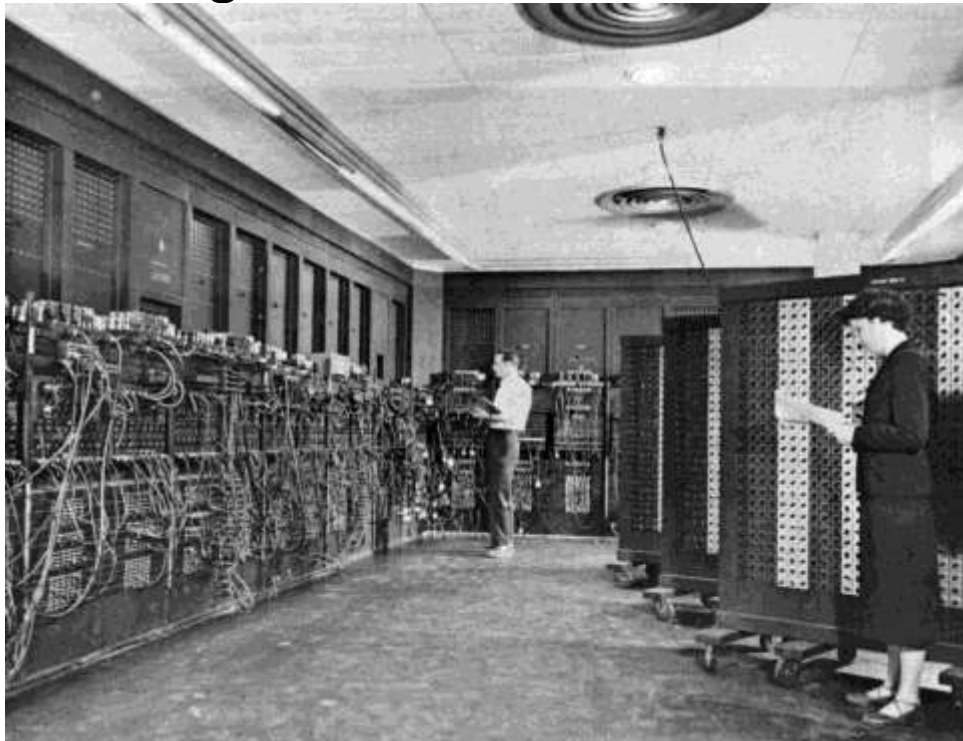
- Why we need the paperless meeting system?
  - In the board of the directors at JACIC, we printed 750 papers, wanted to reduce papers.
  - To reform the business process, JACIC are proposing to use a tablet computer.
  - We saw some tablet computer in the construction field tours.



## 2. Needs, try and error

- The form of tablet computer

We thought that a tablet computer must be light weight enough to have in one hand like smart phones.



← Too big example

Reference: Wikipedia “ENIAC”  
Weight: 27t, approximately  
5,000,000 hand-soldered joints

## 2. Needs, try and error

### ▪ Security

- “The Study Team”, tried the paperless meeting about the paperless meeting system, twice.
- This system seemed good! Smooth operation.
- January 2013, we proposed to the officers and few key managers.
- The meeting was failed, but allowed continuing studies.



## 2. Needs, try and error

### ▪ Security

- Scenario 1: The curtain that prevent the radio wave from leaking.
  - We could not avoid the radio wave leaking completely by the curtain.
  - **Not adopt** : We can't satisfy the complete effect.
- Scenario2: Hiding by strong encryption technology
  - **Adopt** : We can satisfy hiding the contents.

## 2. Needs, try and error

- Can we change the meeting style without papers ?



Our display system



The inspired case

- We put the four displays in the center of meeting room.
- These displays reflect the contents of the meeting. **JACIC**



## 2. Needs, try and error

▪ What kind of operating system should we select?

- Both android and iOS need the management depend on their IDs and application programs.



- We selected Windows to avoid the additional operation.

- Wireless access point  
We selected Leading maker device



## 2. Needs, try and error

- The method of viewing the contents in paperless meeting

Scenario 1 Downloading the contents before meeting

Scenario 2 The system of the paperless meeting

Scenario 3 Login one's desktop computer  
through the wireless connection

(Remote desktop)

Adopt

- In April 2014, proposed the paperless meeting, again.  
And accepted!

# 3. Current situation

- How to recharge the 25 tablet computer
  - Recharge rack
  - Disconnect Wi-Fi
  - Personnel change



# 3. Current situation

- Effect

- Save the 750papers(30papers X 25members) at once the paperless meeting.



# 3. Current situation

- Some troubles of disconnection
  - Disconnect
    - The reason is that tablet computers try reconnection to the wireless antenna many times.
    - We solved to adopt the wireless controller that adjust the channel and the wave strength.
    - But, Sometimes we faced the disconnection.
    - Adjust the wireless controller and the network appliance.

# Thank you for your attention.

- I would thank all relations for cooperation.
  - The challenging opportunity from the officers.
  - The technical experience with our skunkworks.
  - Had many cooperation from the sales partners and the makers when test the actual equipment.
  - Work together with each the General affairs department and the network supporting team.
- I hope to be the reference case for a system engineering staff of the construction field.

Thank you for your attention.

