

INSTANT MESSAGE APPLICATION FOR COLLABORATIVE WORK IN ARCHITECTURAL OFFICE VIA NETWORK SYSTEM

NUTTAWUT PUTTIPONG

*Rangsit University, 52/347 Muangeak, Phaholyothin Rd.,lakhok, Phatumthani 12000
Email address: info@rsu.ac.th, nes.nuttawut@gmail.com*

Abstract. This developed software has objectives to improve and develop working style of architectural organizations to suit the world nowadays and to increase capability and convenience in working of coordination and assignment as well as following up task progression in drawing works to be finished timely the determined schedule so that would reduce problems due to time and distance. All participating parties can work and coordinate together whereas such colleague may be in another place or another time. The software designed by us is to be used in operation via network system supporting operation in collaborative working style. The program consists of 2 main parts, namely:

- Servers used by project manager to coordinate with colleagues or to assign tasks, pursue the work progression.
- Clients who are the part, the users use for coordination with the project manager and other users themselves.

Keywords. Instant Messaging; Collaborative Designs Coordination; Digital Communications System

1.Introduction

Since the progressive technology in nowadays has important role for working in all career, the working style had changed. The applications were invented in many careers in order to reduce the working time, convenience and the effective working. Therefore, the computer is the tool which helps to increase efficiency in working. In the present day, the network system is used both internal and external organization for sharing the information among departments inside the organization and connecting with the outsider via network system, it could reduce the coordinative problems such as distance and time. On the other hand, it is convenience and received information easily. Because of its working style via network system, it makes the kind of computer program such Instant Message is popular such as .NET Messenger Service, AOL Instant Messenger, Excite/Pal, Gadu-Gadu, Google Talk, iChat, ICQ, Jabber, Qnext, QQ, Skype, Trillian, Yahoo! Messenger and etc.

Instant Message or IM is the operational pattern of the software which uses typing message to communicate via network system. It is the live communication between two people or more. According to the operational pattern of this software, the organization can adapt this program to use as tools which need collaborative working in order to accompany the progressive and coordinative working via network system effectively.

2. The adapted Instance Message in the Organization

Most of the architectural organizations contain with designer team, consultant team and contractor those use collaborative work in many process of working. According to the analyzed working style can indicate the part that this program can access to serve the work which is the working part of designer team in the period of Outline Proposals, Scheme Design, Detail Design and Production Information. So, the Architect Organization Structure shows on figure 1. and the process of working on table 1.

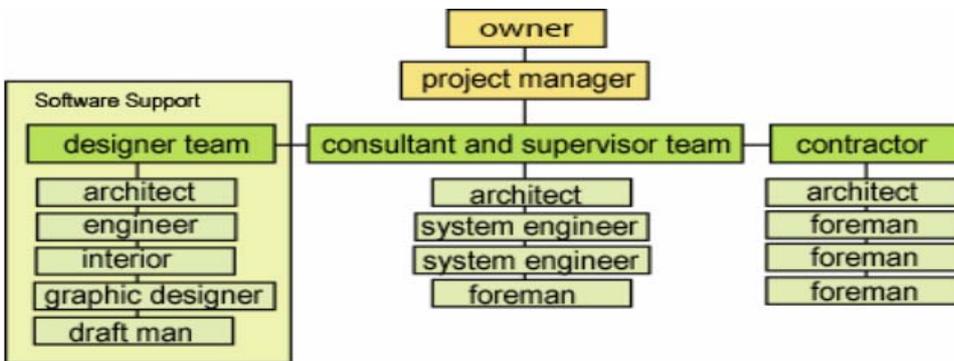


Figure 1. the Architect Organization Structure.

TABLE 1. the responsibility of each working process.

Key	Stakeholders				
	Project Manager	Designer	Consultant	Contractor	Client
● = Direct responsibility					
○ = Cooperation					
◆ = Advising					
△ = Inform for coordinating					
◇ = Consideration and					
Improvement					
Inception		●	◆		◇
Feasibility Study		●	◆		◇
Outline Proposals		●	◆		◇
Scheme Design		●	◆		◇
Detail Design		●	◆		◇
Production Information	△	●	◇		◇
B.O.Q	△	●	◇	△	◇
Bidding		◆	●	○	◇
Project Planning	●		○	○	◇
Operation on site	△	◆	◆	●	◇
Completion	△	◇	◇	●	◇
Feed Back	△	●		○	



= Showing the process that this program helps to support the work

3. The point of view of invented program

The point of view of invented communication program via network system is divided into two parts. The first important part is Server which is used by the team leader and the second part is Client which is used by all team members. According to the diagram on figure 2. it is the

transmitted data via network system to the receiver and interpreted data in order to show on display. It is two ways communication as showing on diagram.

Concept

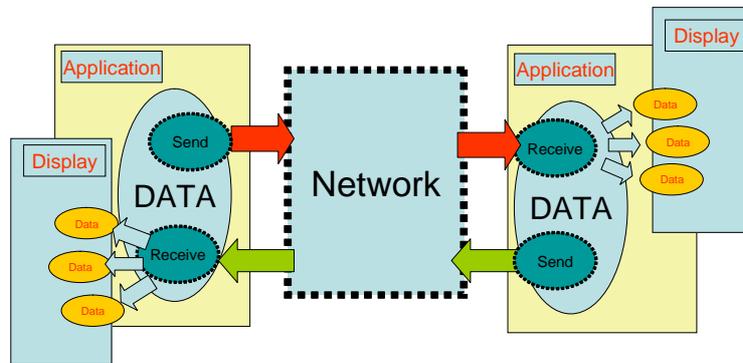


Figure 2. the transmitted and interpreted data of Instant Messenger program

4. The corporative working method via network system

The designer team has to follow the leader command. Before starting work, the designer team has to understand about the concept of work. They have to know what the ownership wants, the need of the user and the budget of construction. Future more, they have to consider the possible ways in the part of planning which is related to the city plan law and design. So, the coordinative working with the planer is needed. When all data have already collected, it will have conference among designer team in order to find out the conclusion of the want of the user for using in drawing work. In the designer team will have the leader who assigns the work to each member in the team as showing on figure 3. When all team member know their responsibility, they will have the conference about problem and any point of doubt in each conference as showing or



Figure 3. the lines will connect between the work and the person in order to separate their work.



Figure 4. can consult together via video conference.

After the conference via meeting room until they got the summary of work. Each team member will do the work that they were assigned. During they work the Client program will focus the working of each team member and transmit to the Server which help the leader can check the work immediately as showing on figure 5. and figure 6. When the organization use this program to serve the working in the period of designing process, it can notice that the team leader can follow up task progression in drawing works and give the suggestion to each team member closely via the Server program which can reduce the working problem such as the mistaken working of the team member that occur from the lacking of suggestion in working or the complicated working of the team member that occur from the lacking of coordination those all mistaking are always occurred frequently which lead to the ineffective work and also waste the time to correct. Therefore, the coordination via this program can solve all those problems then the working is more convenience and the capability is also increased. The working flow chart show on figure 7.

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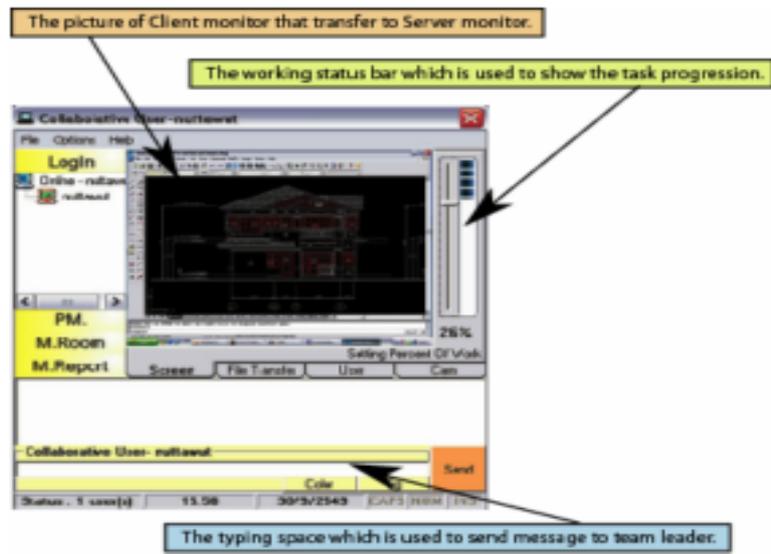


Figure 5. The Client programs that each team member uses to coordinate with the team leader.



Figure 6. the working process of Server program that the project manager can follow up task progression of each team member.

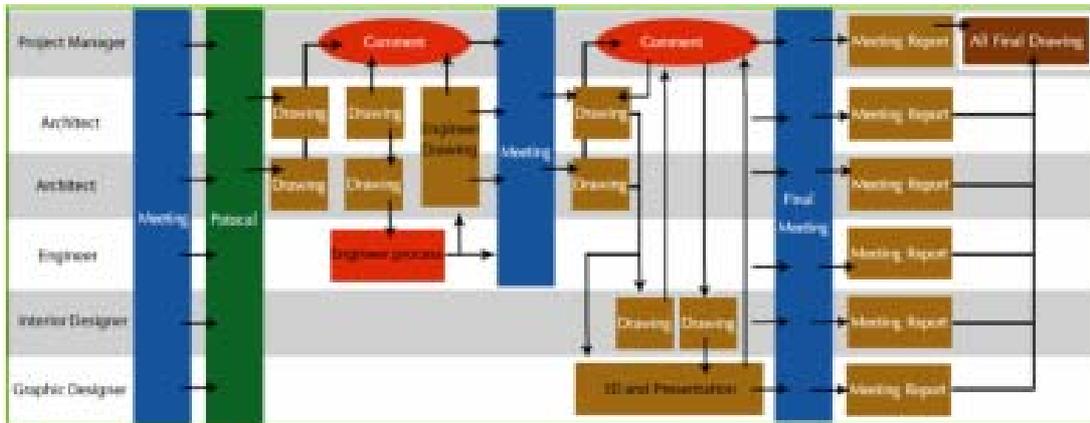


Figure 7. the working method since the beginning until finishing

5. Conclusion

The purpose of this research is to develop Instant Message program for using in the office or in the architectural organizations which use to protect the copyright of the software and leak out the important data of the organization. Moreover, it is developed for serving the coordination and controlling the designer team in the period of designing and drawing work. This program can adapt to use in order to reduce problems due to time and distance. In addition, this program can solve the problems in the process of working which occur at the organization in nowadays. For example, the late working due to the lake of coordinative working that makes the mistake frequently. And sometime, the coordinate with colleagues who live in the different places, it is difficult to connect each other and also waste the time.

6. Suggestions

1. It should develop the capability of this program in order to serve in any of working style.
 - To add function of video chat in order to make the video conference to be more effective.
 - To add function of comment on file .dwg
 - To add the colleague in working from the program which this program is the testing program that can assemble only 5 people.
 - To add the document that assign from this program is the testing program then it was created 16 drawing works.
 - To develop the transmitted and interpreted data via network to be more effective.
2. It can adapt to use with the coordinative working in order to control designing works.

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