DEVELOPMENT OF THE PM-SUPPORTING TOOL IN THE JAPANESE BUILDING CONSTRUCTION MARKET

-IMPROVEMENT OF AN APPLICATION SOFTWARE FOR SCHEDULING-

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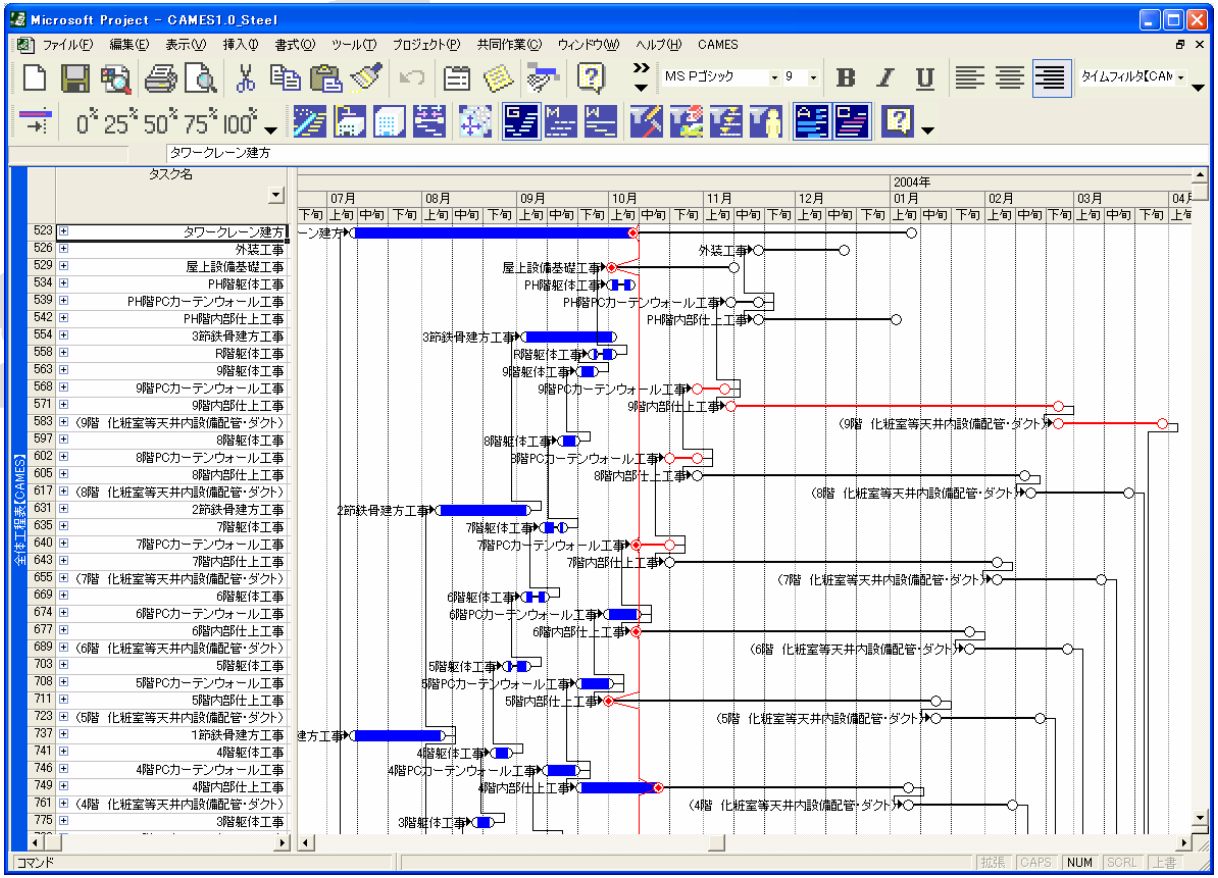


CONTENTS

Part Ⅰ : BACKGROUND

Part Ⅱ : DEVELOPMENT OF “CAMES”

Part Ⅲ : ACTUAL UTILIZATION OF CAMES

Part Ⅳ : FUNCTIONS AND EFFECTS

Part Ⅴ : EVALUATION AND PROBLEMS

Part Ⅵ : CONCLUSION

Part I　BACKGROUND

1.History

2.Needs for PM or PM-Supporting Tools

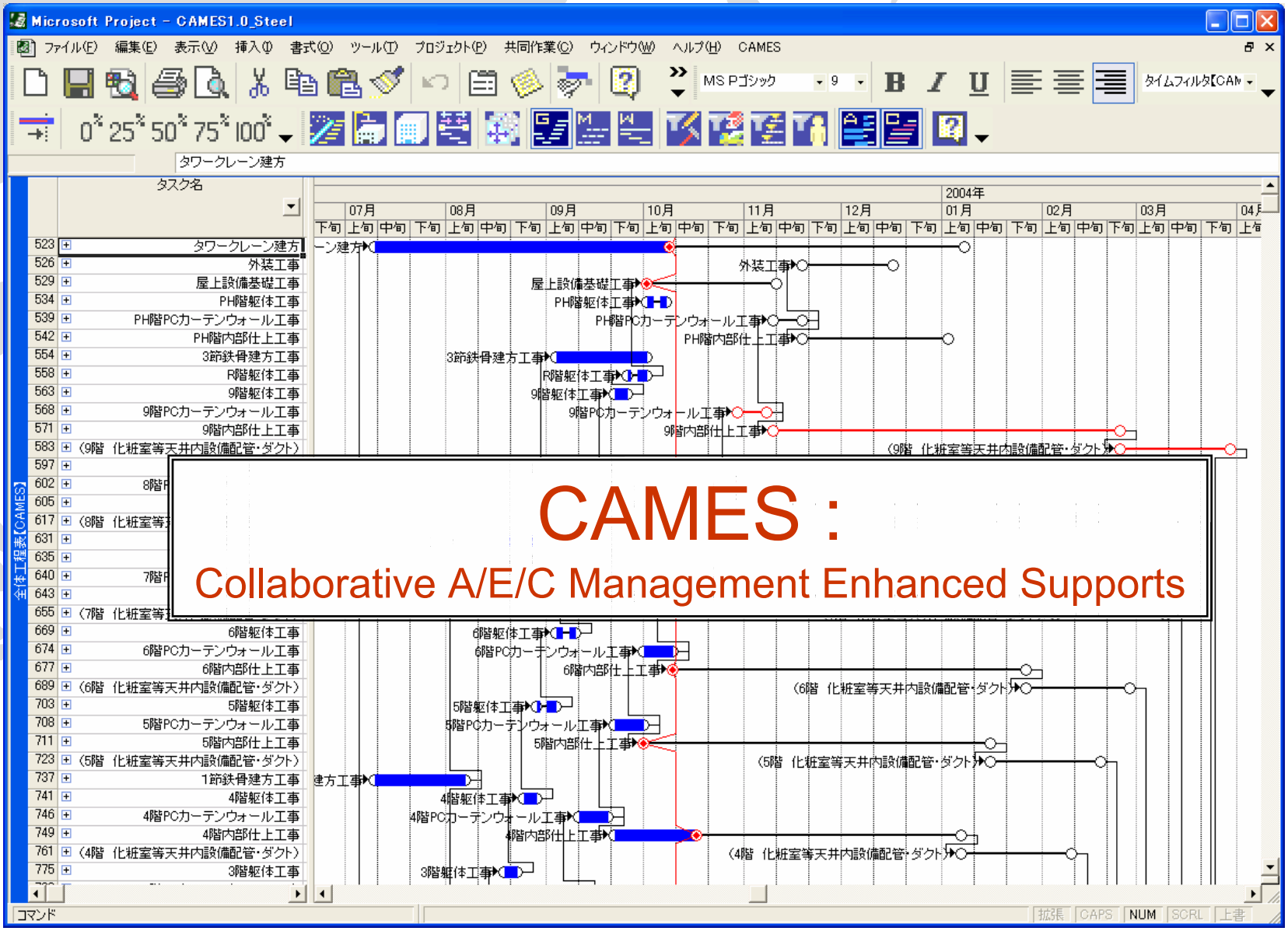
3.CAMES

1. History

2. Needs of Japan's construction industry for PM or PM-Supporting Tools

1. Drop in Productivity
2. Heightened Response to Client's needs
3. Increased Competition ->Reduced costs -> Skilled engineer made redundant
4. Greater appreciation by customers for PM
5. Internationalization
6. Increased use of IT in the industry
7. Improvement in PM tools

3. CAMES



CAMES :

Collaborative A/E/C Management Enhanced Supports

Part II DEVELOPMENT OF CAMES

1.Scope of Development

2.Concepts of Development

1. Scope of Development

Table 1 Development Scope of CAMES ver1.0

	Use	Structure	Number of Floors	Typical Floor Area
Category 1	Office	Steel	20 or less	200-2000m^2
Category 2	Residential	Reinforced Concrete	14 or less	200-2000m^2

Construction work phase

2. Concepts of Development

1) Smooth Introduction to the Real Project

2) Correspondence to the Needs of the Maker Side

3) Correspondence to the Needs of the Client Side

Part III ACTUAL UTILIZATION OF CAMES

1.Building Outline

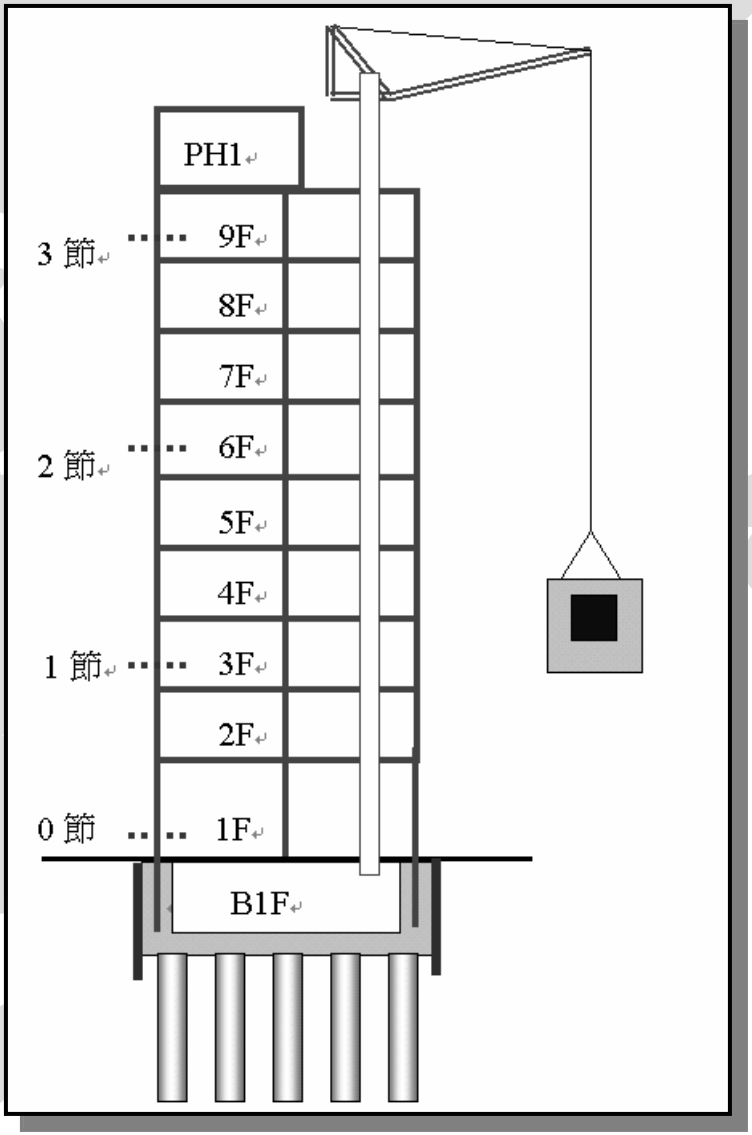
2.User Group

3.Applying the System

4.Work Breakdown Structure（WBS)

5.System Environment t

1. Building Outline



Use: office

Floors: 9 Floors, 1B floor

Height: 42 m

Total floor area: 10,000m²

Structure: Steel Structure

Foundation: Cast in place pile

Outer Wall: Pre-Cast curtain wall

Contract Method: Lump sum contract

2. User Group

User Group	Authority
Client	Perusal of summary of schedule and documents.
Architect/Engineer/ Supervisor	**Schedule (Perusal and progress report)** Document (Perusal, Registration, Approval)
General Contractor (PMr)	**Schedule (Plan, Manage progress)** Document (Perusal, Registration, Approval)
General Contractor (others)	**Schedule (Perusal and progress report)** Document (Perusal, Registration, Approval)
Sub Contractor	**Schedule (Perusal and progress report)** Document (Perusal, Registration, Approval)
System Manager	Executes control of the whole system
System Maintainer	Executes support at the time of problem occurrence

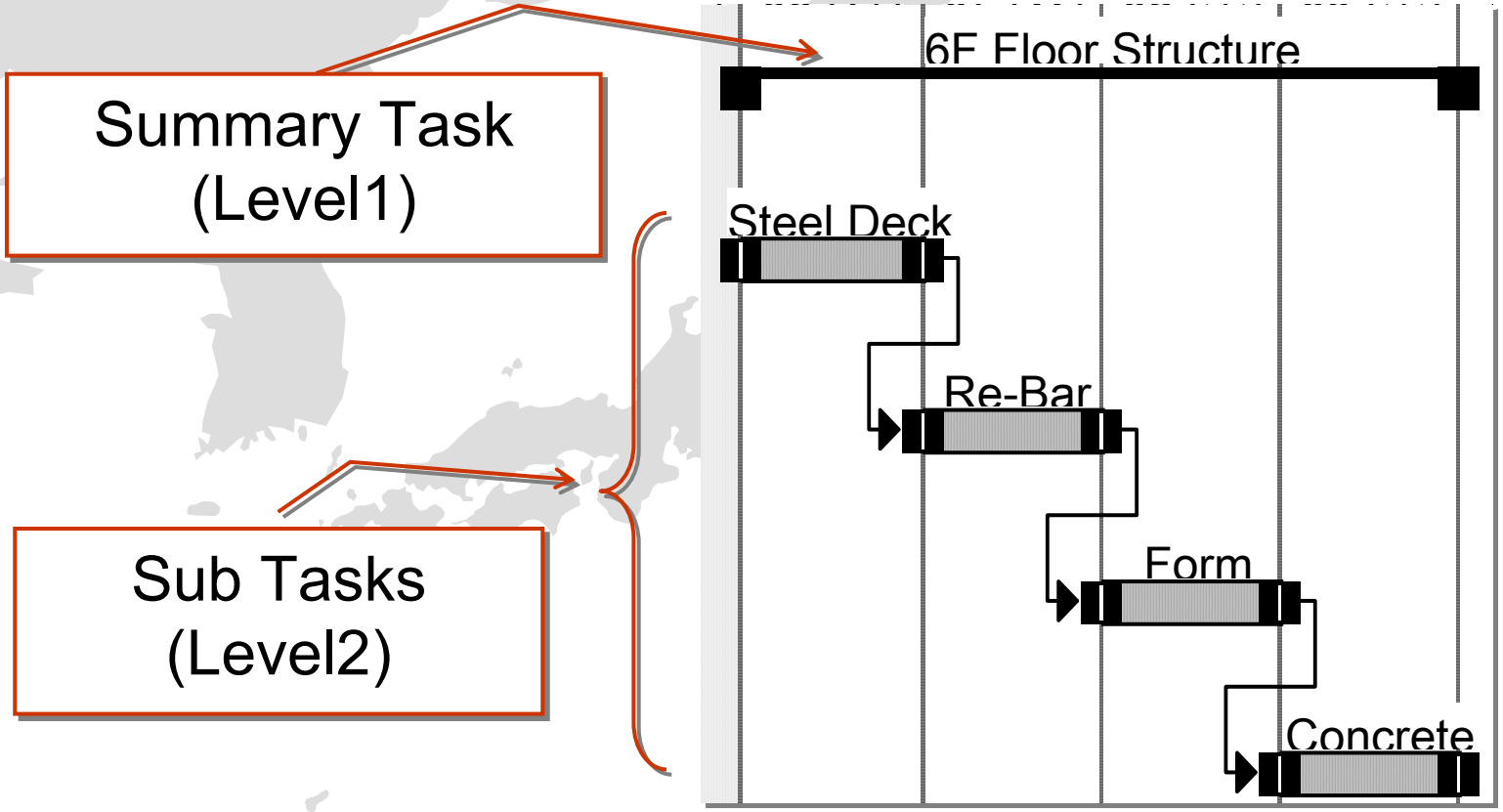
3.Applying the System

- ***PMBOK***

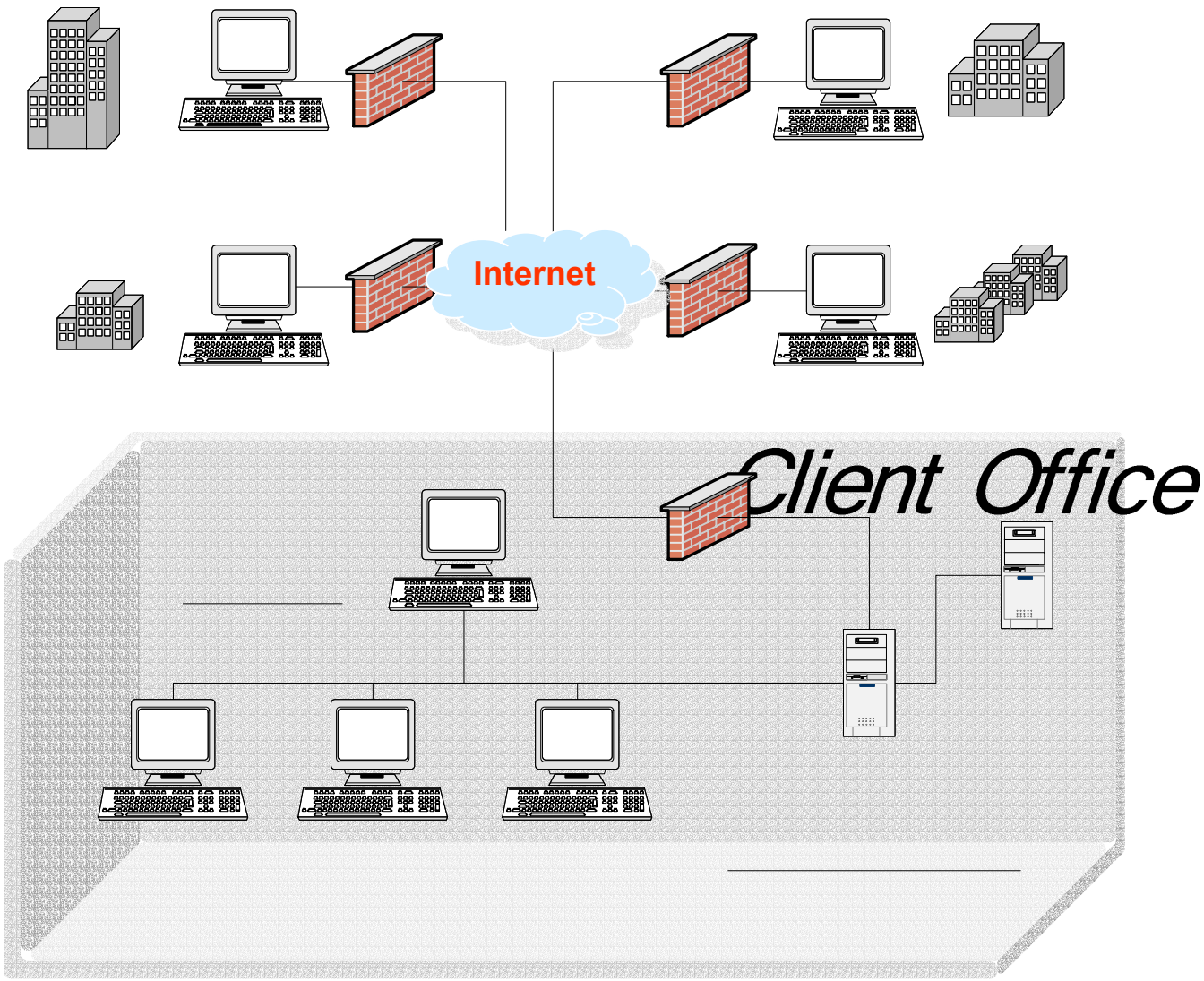
  (Project Management Body of Knowledge)

- ***CAMES's system***

4. Work Breakdown Structure (WBS)



5. System Environment



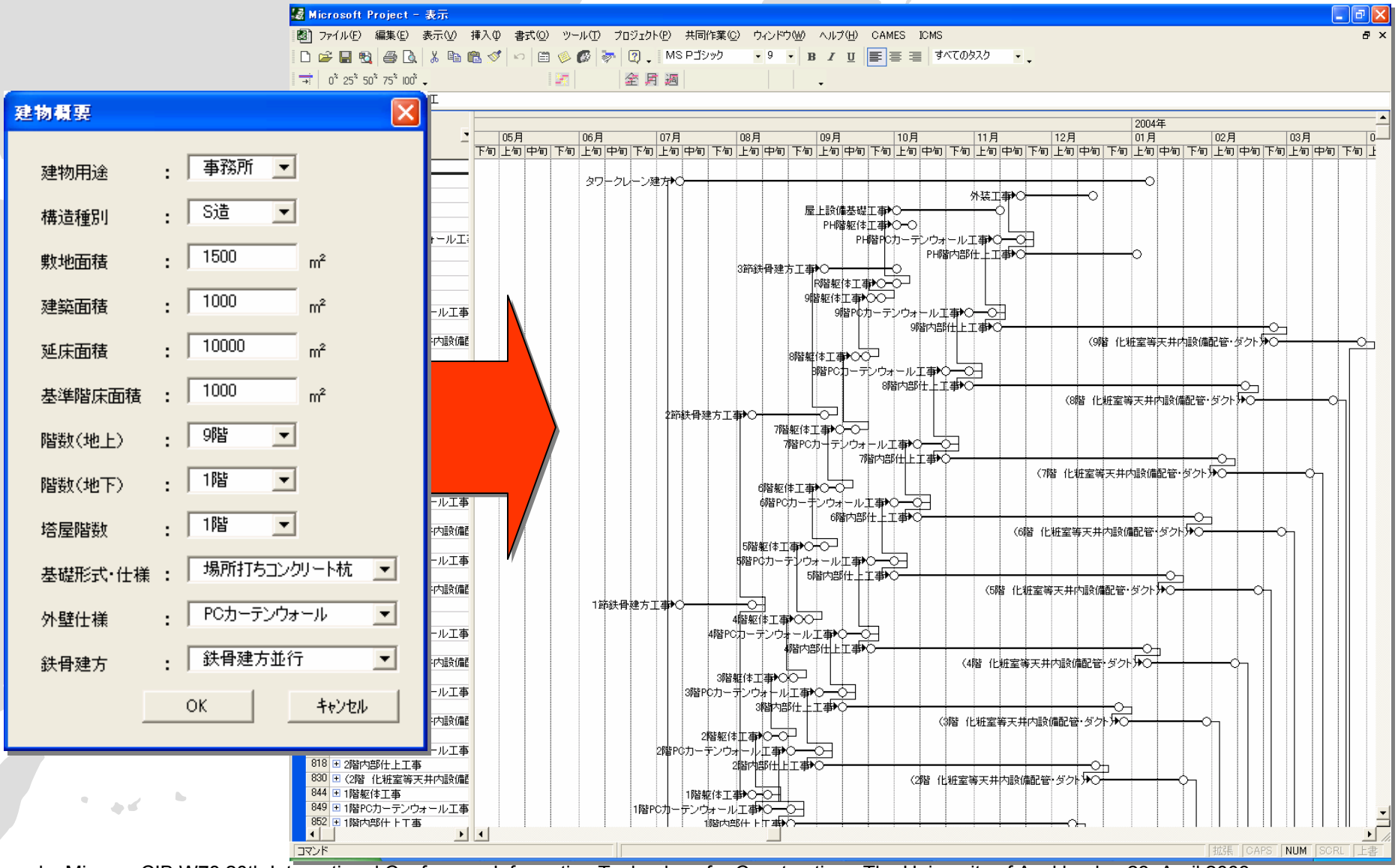
Internet Ex
(Web Access +K

Part Ⅳ FUNCTIONS AND EFFECTS

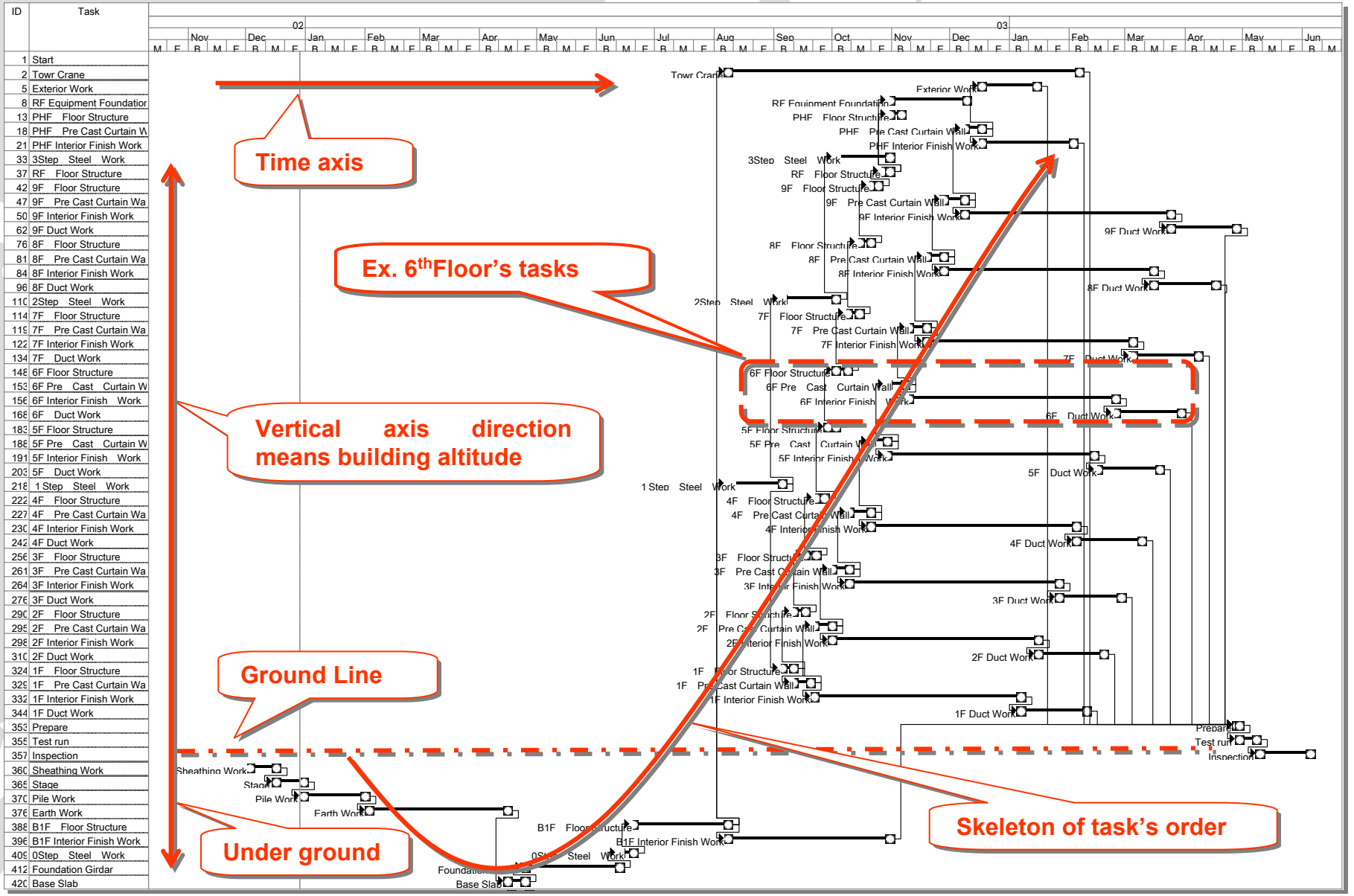
1.Schedule Planning and Task Setting Functions
2.Arrow Network style Schedule Display Function
3.Task Filtering Functions

4.Other Functions on MS-Project for PMr
5.Function on Web for User Group

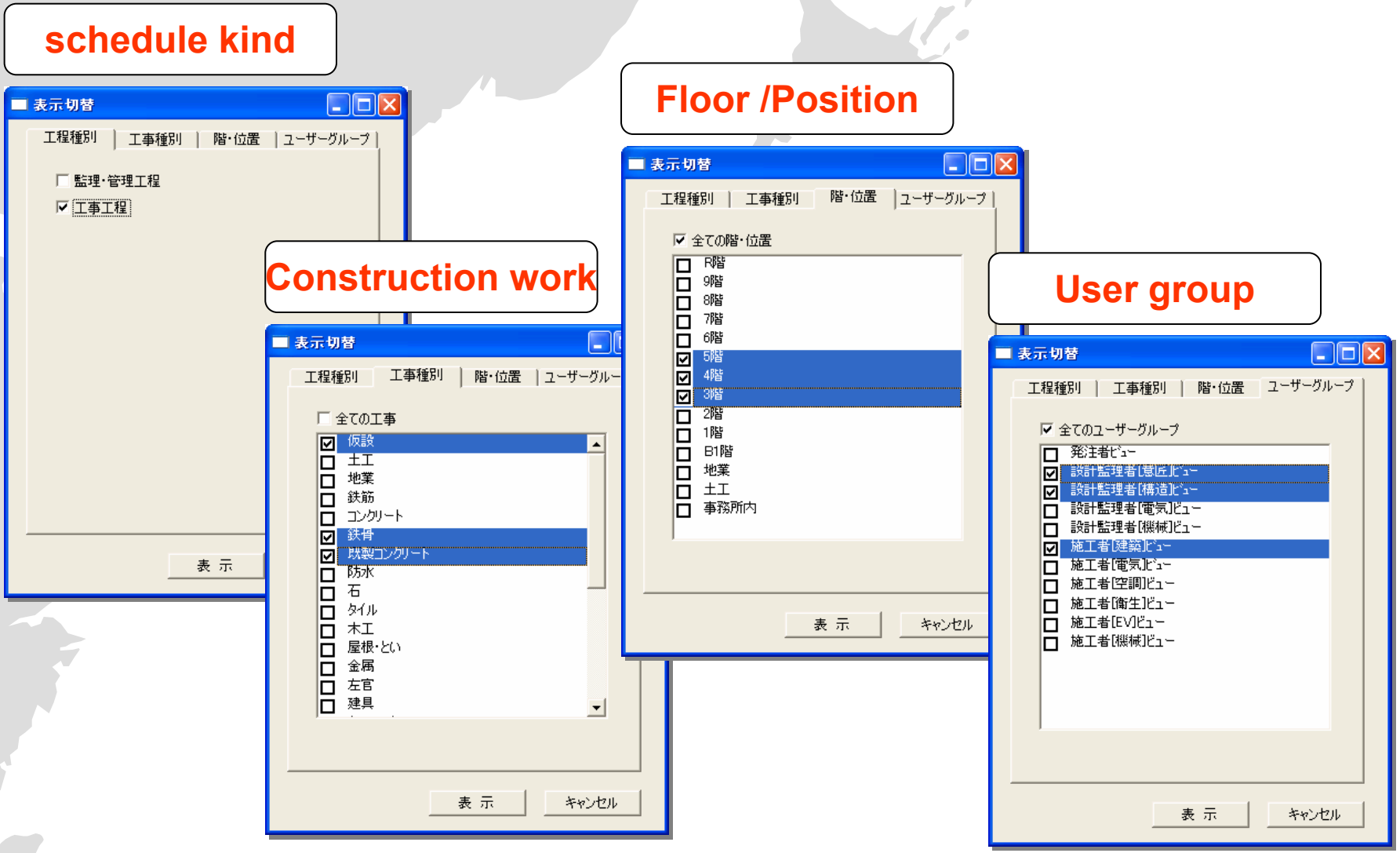
1. Schedule Planning and Task Setting Functions



2. Arrow Network Style Schedule Display Function



3. Task Filtering Functions



4. Other Functions on MS-Project for PMr

1) Tool bar Arrangement Function (additional function) for easy use

2) Printing Support Function (additional function) for labor reduction

3) Progress Control Function (additional function) for easy use

4) PMr Report Preparation Functions (original function) for labor reduction

5) Resource Control Function (original function) for building construction use

6) Cost Control Function (original function) for building construction use

5. Function on Web for User Group

1) Task Inspections/Achievement Report Functions (original function) for collaborative use

2) Progress Report Functions (original function) for collaborative use

3) Documents Preparation Support Functions (additional function) for labor reduction

4) Task Link to File or Folder Functions (additional function) for improvement of productivity

5) Workflow Functions (original function) for building construction use

Part V EVALUATION AND PROBLEMS

1.Evaluation of CAMES

2.Other Problems of CAMES

3.Improvements

1. Evaluation of CAMES

- ***Response of Real estate company's members***

- ***Response GC's members***

2. Other Problems of CAMES

1) Standards & Document Templates (Original, ISO9000s, ISO14000)

2) Management Construction Manuals, Supervisor's manuals

3) Special methods of construction or technology

4) Knowledge documents & data (Safety, Quality, Cost, Schedule, Resource)

5) Existing backbone system or sub system

3. Improvements

1) Refine the developed ver1.0's functions

2) Functions for the Client's needs

3) Value Engineering function

4) Guidance function

5) Internet function under DB server

Part VI CONCLUSION

1. ***Needs* of PM or PM-supporting tools**
2. ***Difficulties* of adopting in Japan's culture**
3. **Development of *CAMES* using MS-Project**
4. ***Next* phase**