



شبكة المعلومات الجامعية

Ain Shams University

Information Network

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

جامعة عين شمس

شبكة المعلومات الجامعية  
@ ASUNET

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

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نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
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15-25- c and relative humidity 20-40%





# شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم

# بعض الوثائق الأصلية تالفة

# بالرسالة صفحات لم ترد بالاصل

**DEVELOPMENT of COMPUTERIZED PROJECT CONTROLS  
MANAGEMENT SYSTEM (PCMS)**

624,1

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**MONIR ABD EL-AZIZ MONIR MOUSTAFA**

Master of Science of Construction Management 1994 [Cairo University-Faculty of Engineering],

Diploma of Construction Management 1992 [Cairo University-Faculty of Engineering],

B.Sc. of Civil Engineering 1985 [Cairo University-Faculty of Engineering]

A Thesis Submitted to the  
Faculty of Engineering at Cairo University  
in Partial Fulfillment of the  
Requirements for the Degree of

**DOCTOR OF PHILOSOPHY**

**in**

**Civil Engineering (Structures)**

**FACULTY OF ENGINEERING, CAIRO UNIVERSITY**

**GIZA, EGYPT**

**April 2006**

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**Supervised by:**

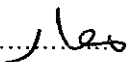
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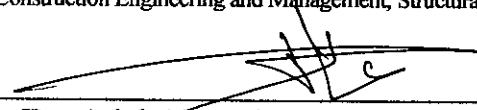
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**April 2006**



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

“وَقُلْ رَبِّ زِدْنِي عِلْمًا”

صدق الله العظيم

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Monir Abd EL-Aziz Monir Moustafa

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## ABSTRACT

Pulling essential Cost, Schedule, and technical information together in a meaningful, coherent fashion is always a challenge facing the project management team. If this can not be done, management information will be fragmented, will not contribute effectively to project management, and may actually mislead the management by presenting a distorted view of the project status [Fundamentals of Project Performance Measurement - Robert R.Kemps].

Nowadays, the majority of large multi-national companies run multiple projects in different countries in parallel, which makes the integration of the Project Controls Process and the timely statusing of the projects are more critical than ever before. With multiple projects underway simultaneously, Integration and Communication are the Key to achieving overall corporate objectives.

This thesis provides an overview of a Computer Software, which integrates the major elements of the successful project controls system in one integrated environment

The Project Controls Management System (PCMS) provides a systematic, organized process for collecting project controls data including Schedule updates, Man-hour statusing, and Progress and Performance measurement, and presenting it in a clear manner on a regular basis. Moreover, it empowers the communication and interaction among the project staff through Internet/Intranet technology, which makes the up-to-the-minute information of all the corporate projects worldwide available at the fingertips of the authorized project members.

The PCMS contains the following modules: Man-hours Monitoring and Control (Electronic Time Sheets, Accounting Payroll Interface), Performance (and progress) Analysis (Earned value calculations), Construction Equipment Control, Procurement Tracking, Estimating, and Schedule Integration. *There is no separate module for Cost Control (due to time limitation), however this aspect is covered in several modules that constitute the basic source for project cost (manpower, equipment, and material) . Other related aspects such as Quality Control/Assurance, Human Resources, Risk Management are not covered in this research due to time limitation as well.*

This thesis explains the approaches used to develop and design the main modules of the PCMS, *focusing on the Control stage.*

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