

## Development an Optimized Model for Pavement Maintenance Management for Syrian Road<sup>1</sup>

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### Abstract

The Pavement Maintenance Management Systems are developed systems aiming at collecting sufficient information about Pavement of roads networks, and using these information to predict the performance of these pavement in future.

The essential components that constitute these systems are: - planning - implementation - preventive maintenance – correctional maintenance – maintenance works priorities .

Through past years, the Syrian pavement of roads networks have developed rapidly . To keep the good and standard performance of this roads net , and ensure comfortable and secure conduit for roads users , it is the aim of this research to " Establish optimum methodology for pavement maintenance management in Syria using database" that help in making right maintenance decision.

The studied system depends upon establishing right methodology to collect input and process data about pavement. After that the data can be used to help decision makers define maintenance requirements according to successive systematic steps that are followed up to develop PMMS taking into account the nature and characteristics of network.

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The most important steps are:

1-Designe of database to store the pavement data and pavement situation survey data.

2- Suggestion of mathematical model for application to define maintenance priorities , and handle report explaining the importance of maintaining certain sections of the network which guides to write report concerning the annual maintenance.

3-Correlate maintenance management with GIS.

In addition , the supposed PMMS process the problem taking depending on the following:

1-The System depends on the available and existing resources and on surveying pavement situations using optical survey, and it can be developable in case using the technical surveying.

2-The system can be implemented in successive stages and it is simple and easy to use.