INDUSTRIAL STATISTICAL STUDIES
OF TELEPHONE INDUSTRY AND UTILIZATION IN EGYPT

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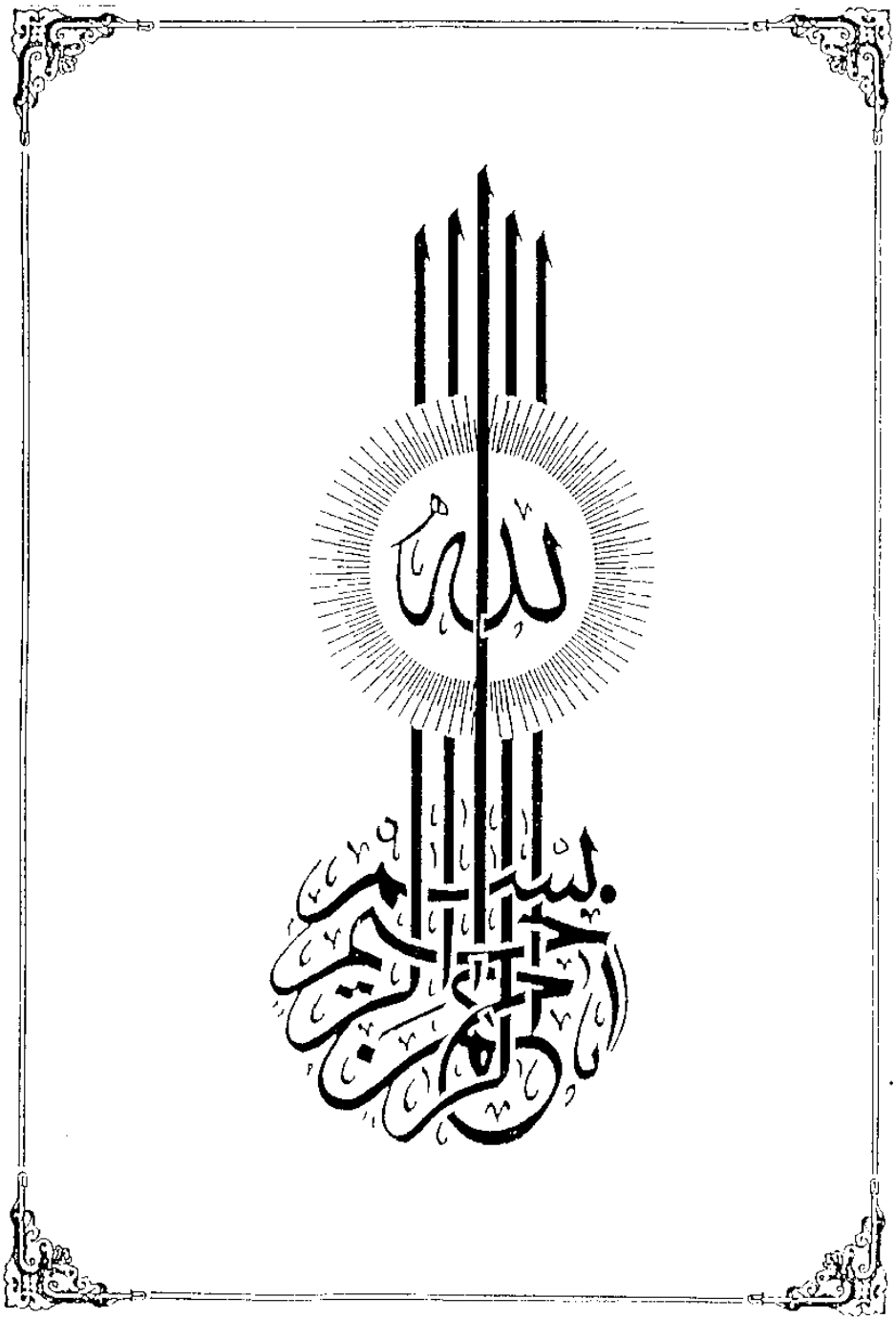

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C O N T E N T S

Chapter One

Introduction

Telephony is a public service for the majority of the population. In fact, it is necessary for the community to reach a certain economic level before the demand for telephones arises . On the other hand, certain basic telecommunication facilities are necessary for furthering the economic development of the country. Nowadays, all countries have reached the stage, when the telephone becomes a necessity for all the individuals in the country. For this reason, it is given a great importance by most countries all-over the world. This importance is indicated in the development of the number of telephones in service in the whole world. It was 134.6 million in 1960 and reached 255.2 million in 1970, i.e. the number has been doubled in 10 years. It is expected that this number will reach 1 billion in the year 2000 . Also, the international mean number of telephones was 4.5 per 100 population in 1960 and jumped to 7.4 in 1970.

In Egypt the growth of telephony is rather small, but it has been enhansed recently due to the State economic plans of raising the standard of living . The number of telephones per 1000 population was 8 and then 11 in 1960 and 1970 respectively .

If real progress is to be achieved, the various telephone equipment should be adequate in number and quality to

comply with the requisites of the developing plans. For this reason the presented work has been undertaken, hoping that it reflects the various sides of the telephony " problem " with a view toward :

i - Focussing attention on such vital service .
ii - The evaluation of the telephone problem .
iii - Forecasting the future development of the telephones.

The undertaken approach is mainly divided into two broad parts . The first part deals with " Telephone Utilisation", which is mainly a technical and statistical study of all concerned items. In the second part the purely engineering aspects are dealt with under the heading of " Telephone Industry " .

Accordingly the undertaken work is presented in the following chapters :

Part I ; includes the following chapters :

Chapter 2 - " Telephone equipment in a national system", a review of the main equipment forms a telephone system, followed by an approximate estimation of the investment required per subscriber line. It concludes with a discussion the reasons for telephone growth.

Chapter 3 - " Exchange lines and telephones in service "; a statistical analysis of the development in the installed lines and telephones in service, based on the last 12 years . This analysis is carried out for the whole country and for the different zones of Egypt. The analysis shows that Cairo embraces the greatest part of the telephone service . Also the analysis points that the tendency for automatic exchanges continuously increases .

Chapter 4 - " The telephone density " ; a review of the different methods employed in forecasting the future development of telephone density and thus the number of telephones . Applications of these methods to forecast the telephone density and the number of telephones in Egypt in the next 10 years are included .

Chapter 5 - " Comparative study of the telephone density in Egypt and the other countries " ; a study of telephone density in the closely related countries in comparison with that of Egypt . The study points out strickly the low telephone density of Egypt.

Part II; includes 4 chapters which are :

Chapter 6 - " Historical notes and description ", a brief review of the circumstances and stages of introducing the local telephone industry and telephone equipment . The nature of the telephone industry is indicated through statistical and engineering analysis of the telephone products . Calculations of the production capacity of the local telephone factory and the new projects are included .

Chapter 7 - " Productivity of the local telephone industry " ; a study of the factors affect the productivity followed by some efficient measure for the productivity . The study points out a noticable improvement in the rate of growth in the local telephone industry .

Chapter 8 - " Improvement of productivity " ; an applied study of one of the most efficient tools employed for increasing the productivity of the assembly lines . It involves the assembly line balancing technique .

Chapter 9 " Controls techniques " ; a review of the different techniques employed by the local telephone factory in controlling the production and its quality . Practical exa mples are included .

The thesis ends with a list of 39 references almost all of them are recent .

PART ONE

Telephone Utilization