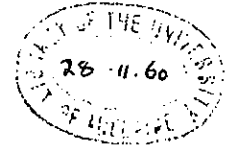


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RECORD OF SCIENTIFIC WORK

UNDERTAKEN BY

W. A. S. BUTEMENT, C. B. E.

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1. PREFACE

1.1 INTRODUCTION.

The work which the candidate submits for the degree is in the general field of electronics, and more specifically in the categories of Radar and Communication. When the work was done, most of it, and particularly that undertaken during the war, was "classified" as secret for obvious reasons. Some of it has since been published by the candidate, some has been published in scientific books published by others, but attributing the work to the candidate, and some is published herewith. All the publications are now "unclassified" and may be freely circulated. The work is not described in the order in which it was undertaken, but according to subject matter so that it may be more clearly set down.

Had the work been undertaken in circumstances where no security regulation had to be applied it would all have been published in the scientific literature within a few months of its completion. In the event, however, it was necessary that it be published some years after its completion, when security regulations no longer applied. The consequence of this has been that in the case of each item submitted, the work has led to the general adoption of a principle or method which is now well known, and widely utilised in the relevant branch of the science, and this has happened before the publication of a detailed consecutive description of the work undertaken. For the purpose of providing a more complete record, brief reference is made to the candidate's post war work which has been more of a supervisory nature and has involved not only electronics but many other branches of science.