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TECHNICAL REPORT

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Quantification methodology for greenhouse gas emissions for computers and monitors

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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QUANTIFICATION METHODOLOGY FOR GREENHOUSE GAS EMISSIONS FOR COMPUTERS AND MONITORS

FOREWORD

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IEC TR 62921, which is a Technical Report, has been prepared by technical area 13: Environment for AV and multimedia equipment, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

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The text of this Technical Report is based on the following documents:

Enquiry draft	Report on voting
100/2381/DTR	100/2448/RVC

Full information on the voting for the approval of this Technical Report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

Many organizations are looking to adopt product greenhouse gas emissions reporting mechanisms, including:

- computer and monitor manufacturers, as well as their suppliers and downstream users;
- governmental agencies including France, China, Japan, Korea and the European Commission;
- retailers and non-regulatory agencies.

There have been several international and regional efforts to provide guidance for calculating product greenhouse gas emissions. Some of these efforts include IEC TR 62725, ITU-T L.1410, ETSI TS 103 199, and Greenhouse Gas Protocol ICT Sector Supplement.

Unfortunately, some lack of specificity within these documents allows for variability that can create a significant difference in product greenhouse gas emission results, depending on how a practitioner interprets the information. Throughout the process of developing IEC TR 62725, there was significant discussion regarding the need for further specificity, transparency and pragmatism in methodology guidance for products covered under IEC TC 100, including computers and monitors. There is an urgent need to enable methodologies that offer accurate and defensible estimates of impact in a rapid and effective manner. This Technical Report aims to fill in some of those gaps.

This Technical Report builds upon the structure laid out by IEC TR 62725. Its goal is to support universal streamlined product greenhouse gas methodologies for practitioners, with a further goal of harmonizing the various regional efforts currently in progress.

This Technical Report's quantification methodology aims to be compliant with, and therefore be used within, a number of these broader standards efforts. It will provide detailed guidance for estimating greenhouse gas emissions for computer and monitor products, in order to obtain consistent, accurate results. The benefit of consistent results is that they can assist multiple efforts, including but not limited to:

- supporting customer enquiries;
- instituting sustainable design practices;
- initiating conversations around emissions reduction strategies with suppliers and downstream users;
- targeting data collection within the supply chain in order to address data quality issues.

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QUANTIFICATION METHODOLOGY FOR GREENHOUSE GAS EMISSIONS FOR COMPUTERS AND MONITORS

1 Scope

This Technical Report outlines detailed guidance to streamline the quantification of greenhouse gas emissions for computers and monitors. Other audio, video and multimedia products, such as e-readers, phones, tablets, thin clients, workstations and storage equipment, can be included in future revisions of IEC TR 62921.

For this Technical Report, computers and monitors include notebooks, desktops, and liquid crystal display (LCD) monitors.

This Technical Report provides specific guidance for the use of streamlining techniques that minimize cost and resources needed to complete greenhouse gas emissions quantifications. In addition, the product category rules (PCR) section of this Technical Report recommends “state-of-the-art” process and data assumptions in order to reduce uncertainty. Lastly, this Technical Report provides an example of how a calculation could be performed.