



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

T.43

(07/97)

SERIES T: TERMINALS FOR TELEMATIC SERVICES

Colour and gray-scale image representations using lossless coding scheme for facsimile

ITU-T Recommendation T.43

(Previously CCITT Recommendation)

ITU-T T-SERIES RECOMMENDATIONS
TERMINALS FOR TELEMATIC SERVICES

For further details, please refer to ITU-T List of Recommendations.

ITU-T RECOMMENDATION T.43**COLOUR AND GRAY-SCALE IMAGE REPRESENTATIONS
USING LOSSLESS CODING SCHEME FOR FACSIMILE****Summary**

This Recommendation defines a colour data representation method in order to make it possible to interchange colour and gray-scale image data using Recommendation T.82 coding scheme over facsimile communication services such as Group 3 and Group 4 facsimile. In this Recommendation, three types of images are treated. The first one is one bit per colour CMY(K) or RGB image. The second one is palettized colour image in which palette tables are specified with CIELAB colour space defined in Recommendation T.42. The last one is continuous-tone colour and gray-scale image specified with CIELAB colour space defined in Recommendation T.42.

Source

ITU-T Recommendation T.43 was prepared by ITU-T Study Group 8 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 2nd of July 1997.

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

INTELLECTUAL PROPERTY RIGHTS

The ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. The ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, the ITU had/had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

© ITU 1997

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the ITU.

Recommendation T.43**COLOUR AND GRAY-SCALE IMAGE REPRESENTATIONS
USING LOSSLESS CODING SCHEME FOR FACSIMILE***(Geneva, 1997)***1 Scope**

This Recommendation defines colour and gray-scale image representation and their coding schemes in order to make it possible to interchange colour and gray-scale image data such as one bit per colour CMY(K) or RGB image, palettized colour image, and/or continuous-tone colour and gray-scale image, using lossless coding scheme over a facsimile communication service such as Group 3 or Group 4 facsimile.

Its purpose is to specify representation and lossless coding schemes for three types of colour and gray-scale images. The first one is one bit per colour CMY(K) or RGB image. The second one is palettized colour image. The last one is continuous-tone colour and gray-scale image.

This Recommendation, together with documents such as parts of Recommendations T.4 and T.30, or T.563, T.503 and T.521, will define a colour image data format that may be used by colour facsimile service and by other telematic services.

In this Recommendation, the coding scheme specified in Recommendation T.82 (JBIG) is used for lossless encoding of these three types of colour and gray-scale images. Application of other coding schemes are for further study.

2 Field of application

This Recommendation defines a colour data representation and coding scheme which mainly enables a receiver to reproduce colour image data as specified by the sender.

It is assumed that when a service is performed using this Recommendation, all non-basic features are subject to negotiation.

3 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; all users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

- ITU-T Recommendation T.42 (1996), *Continuous-tone colour representation method for facsimile*.
- ITU-T Recommendation T.82 (1993) | ISO/IEC 11544:1993, *Information technology – Coded representation of picture and audio information – Progressive bi-level image compression*. (Commonly referred to as JBIG standard)

4 Definitions

The definitions in Recommendations T.42 and T.82 apply to this Recommendation unless explicitly amended.

4.1 JBIG: Joint Bi-level Image Experts Group, and also shorthand for the encoding method, described in Recommendation T.82, which was defined by this group.

5 Conventions

The conventions in Recommendations T.42 and T.82 apply to this Recommendation.

**Documents**

Document Sharing Hub

Recommendation T.43 (07/97)**1**