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IEEE Standard for Documentation Schema for Repair and Assembly of Electronic Devices

IEEE Consumer Electronics Society

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IEEE Consumer Electronics Standards Committee

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IEEE Std 1874™-2013

IEEE Standard for Documentation Schema for Repair and Assembly of Electronic Devices

Sponsor

IEEE Consumer Electronics Standards Committee
of the
IEEE Consumer Electronics Society

Approved 11 December 2013

IEEE-SA Standards Board

Abstract: oManual is a standard for storing and transmitting procedural manuals. oManual's common data format can be used as an offline file package or via online RESTful API endpoints, using XML or JSON. This format is useful for documenting and describing repairs, how-to, work instructions, or any other step-by-step guides. oManual makes it easy to exchange procedural information between services while maintaining usability on mobile devices.

This specification describes the oManual data model, web services API, and bundle file format (a collection of structured files containing a category XML format, a guide XML format and related multimedia). The specification may be expanded in the future to enable additional types of documents.

Keywords: IEEE 1874™, JSON, manual, oEmbed, oManual, RESTful API, XML, ZIP

The Institute of Electrical and Electronics Engineers, Inc.
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PDF: ISBN 978-0-7381-8870-6 STD98507
Print: ISBN 978-0-7381-8871-3 STDPD98507

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Introduction

This introduction is not part of IEEE Std 1874-2013, IEEE Standard for Documentation Schema for Repair and Assembly of Electronic Devices.

Manuals have always included images, parts diagrams, and references to other documents. Those links and metadata are a significant part of what makes a manual effective. The Internet is perfect for making these documents come alive, making it possible to connect guides with tools and reference specifications. Currently, the vast majority of manuals distributed online do not take advantage of this flexibility.

Most dictionaries have definitions of manuals as referring to instruction books. The working definition for this standard is: ***A manual is a document that teaches you how to do something***. To pick a few examples, oManual is a good fit for reference manuals, instruction manuals, user manuals, owner's manuals, how-to manuals, survival guides, and service manuals—but that's just a start.

A huge amount of useful data in existing formats is in static documents where it cannot be leveraged, built upon, and repurposed. oManual is a standard for exchanging and maintaining procedural manuals across diverse systems that solves this problem. Publishing manuals as user friendly oManual files allows for the best of both worlds: manuals that retain their ease of use, but are also easy to maintain and build upon.

oManual is optimized for the creation and exchange of procedural manuals. It is intended for use by anyone who wants to publish manuals, whether they are repair manuals, manuals to create things, manuals to recycle things, how-to guides, work instructions, or any other type of manual which contains step by step instructions. oManual is designed for developers who want a flexible format that allows them to republish content in new ways.

Since documentation exists in many formats—PDFs, Word documents, and specialized formats like DITA—but often lives on a single computer, establishing a single, accurate source for these documents requires complex document management systems. Accessing these (often very large) documents from a mobile device can be challenging because it requires downloading the entire file up front.

Mobile applications usually download information as they need it, from an on-demand API. oManual bridges these two worlds by providing a common data format, and allowing the information to be transmitted via legacy offline files or made available as a web service. An example workflow would be to take XML DITA service manuals, convert them to oManual with an XSLT transform, and then load them onto a JSON server for use by mobile applications.

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1. Overview

1.1 Scope

oManual is a standard for storing and transmitting procedural manuals. oManual's common data format can be used as an offline file package or via online RESTful API endpoints, using XML or JSON. This format is useful for documenting and describing repairs, how-to, work instructions, or any other step-by-step procedures. oManual makes it easy to exchange procedural information between services while maintaining usability on mobile devices.

This specification describes the oManual data model, web services API, and bundle file format (a collection of structured files containing a category XML format, a guide XML format, and related multimedia). The specification may be expanded in the future to enable additional types of documents.

1.2 Purpose

IEEE 1874 file format enables documentation interoperability while allowing flexibility of presentation.