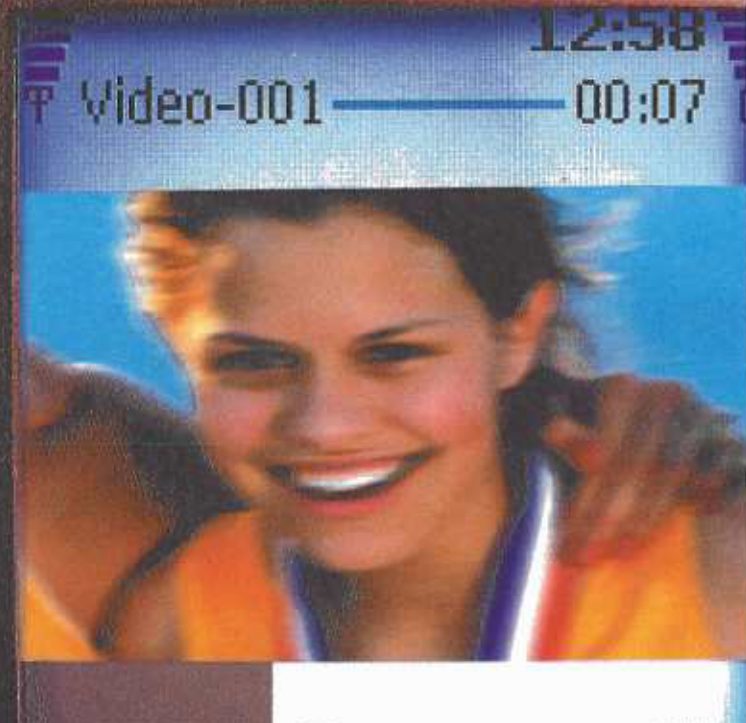


Companion Website

Gwenaël Le Bodic

# multimedia messaging service

an engineering approach to MMS



Companion

Website

Gwenaël Le Bodic

# multimedia messaging service

an engineering approach to MMS



WILEY

**DOCKET**  
ALARM

Find authenticated court documents without watermarks at [docketalarm.com](http://docketalarm.com).

# Multimedia Messaging Service

An Engineering Approach to MMS

Gwenaël Le Bodic

*Alcatel, France*



Email (for orders and customer service enquiries): [cs-books@wiley.co.uk](mailto:cs-books@wiley.co.uk)  
Visit our Home Page on [www.wileyurope.com](http://www.wileyurope.com) or [www.wiley.com](http://www.wiley.com)

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except under the terms of the Copyright, Designs and Patents Act 1988 or under the terms of a licence issued by the Copyright Licensing Agency Ltd, 90 Tottenham Court Road, London W1T 4LP, UK, without the permission in writing of the Publisher. Requests to the Publisher should be addressed to the Permissions Department, John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, England, or emailed to [permreq@wiley.co.uk](mailto:permreq@wiley.co.uk), or faxed to (+44) 1243 770620.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold on the understanding that the Publisher is not engaged in rendering professional services. If professional advice or other expert assistance is required, the services of a competent professional should be sought.

*Other Wiley Editorial Offices*

John Wiley & Sons Inc., 111 River Street, Hoboken, NJ 07030, USA

Jossey-Bass, 989 Market Street, San Francisco, CA 94103-1741, USA

Wiley-VCH Verlag GmbH, Boschstr. 12, D-69469 Weinheim, Germany

John Wiley & Sons Australia Ltd, 33 Park Road, Milton, Queensland 4064, Australia

John Wiley & Sons (Asia) Pte Ltd, 2 Clementi Loop #02-01, Jin Xing Distripark, Singapore 129809

John Wiley & Sons Canada Ltd, 22 Worcester Road, Etobicoke, Ontario, Canada M9W 1L1

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

*British Library Cataloguing in Publication Data*

A catalogue record for this book is available from the British Library

ISBN 0-470-86253-X

Typeset in 10.5/13pt Times by Laserwords Private Limited, Chennai, India  
Printed and bound in Great Britain by TJ International, Padstow, Cornwall  
This book is printed on acid-free paper responsibly manufactured from sustainable forestry in which at least two trees are planted for each one used for paper production.

In addition, a text foreground colour may be specified for each slide text object. This is performed by assigning a colour attribute when linking the text object with the text region as shown below:

```
<text src = "Text1.txt" region = "Text">
  <param name = "foreground-color" value = "blue"/>
</text>
```

It is common to use the following 16 colour keywords defined in [W3C-HTML4]: aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, white and yellow. In addition, RGB hexadecimal colour codes [W3C-sRGB] may also be used (values are prefixed with the hash mark '#') as shown below:

black =	"#000000"	green =	"#008000"
silver =	"#C0C0C0"	lime =	"#00FF00"
gray =	"#808080"	olive =	"#808000"
white =	"#FFFFFF"	yellow =	"#FFFF00"
maroon =	"#800000"	navy =	"#000080"
red =	"#FF0000"	blue =	"#0000FF"
purple =	"#800080"	teal =	"#008080"
fuchsia =	"#FF00FF"	aqua =	"#00FFFF"

The support of colour is not specified in the MMS conformance document. Consequently, the support of text colours is not widely supported by MMS clients.

#### 5.4.11 XHTML as an Alternative to SMIL

As an alternative to SMIL, eXtensible HTML (XHTML) is a language that can also be used for representing message scene descriptions. In particular, XHTML Mobile Profile (XHTML MP) [WAP-277] extends HTML Basic Profile published by W3C [W3C-XHTML-Basic]. HTML MP is a subset of HTML 1.1 but a superset of HTML Basic Profile. XHTML MP has been specifically tailored for resource constrained devices. However, HTML MP remains a suitable language for the definition of rich MMS scene descriptions.

The OMA conformance document [OMA-MMS-Conf] (version 1.2) does not identify XHTML as an alternative to SMIL for MMS clients. Consequently, existing MMS devices seldom provide support for XHTML as a scene description language for MMS.

## 5.5 Example of a Multimedia Message

As shown previously, the multipart structure of a multimedia message is represented in a binary form in order to be efficiently transported between the MMS client and the MMSC. This binary representation is directly derived from the MIME concepts introduced in Section 5.1.1. Figure 5.11 shows the textual representation of a multimedia