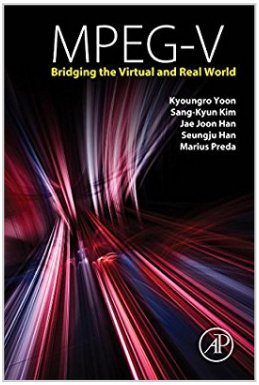


# MPEG-V: Bridging the Virtual and Real World

*By Kyoungro Yoon, Sang-Kyun Kim, Jae Joon Han, Seungju Han, Marius Preda*



**MPEG-V: Bridging the Virtual and Real World** By Kyoungro Yoon, Sang-Kyun Kim, Jae Joon Han, Seungju Han, Marius Preda

This book is the first to cover the recently developed MPEG-V standard, explaining the fundamentals of each part of the technology and exploring potential applications. Written by experts in the field who were instrumental in the development of the standard, this book goes beyond the scope of the official standard documentation, describing how to use the technology in a practical context and how to combine it with other information such as audio, video, images, and text. Each chapter follows an easy-to-understand format, first examining how each part of the standard is composed, then covers intended uses and applications for each particular effect.

With this book, you will learn how to:

- Use the MPEG-V standard to develop applications
- Develop systems for various use cases using MPEG-V
- Synchronize the virtual world and real world
- Create and render sensory effects for media
- Understand and use MPEG-V for the research of new types of media related technology and services

- The first book on the new MPEG-V standard, which enables interoperability between virtual worlds and the real world
- Provides the technical foundations for understanding and using MPEG-V for various virtual world, mirrored world, and mixed world use cases
- Accompanying website features schema files for the standard, with example XML files, source code from the reference software and example applications

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- Published on: 2015-02-24
- Released on: 2015-02-24
- Format: Kindle eBook

## Editorial Review

Review

"...highly recommended for anyone who needs to know about implementation details of the MPEG-V standard for the development of applications or systems, the research on new technology and services related to sensorial media, or the synchronization of virtual and real worlds." --**Computing Reviews, *MPEG-V***

From the Back Cover

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Key features:

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Kyoungro Yoon is a professor in School of Computer Science and Engineering at Konkuk University, Seoul, Korea. He received Ph.D. degree in computer and information science in 1999 from Syracuse University, USA. From 1999 to 2003, he was a Chief Research Engineer and Group Leader in charge of development of various product related technologies and standards in the field of image and audio processing at the LG Electronics Institute of Technology. In 2003, he joined Konkuk University as an assistant professor and has been a professor since 2012. He actively participated in the development of standards such as MPEG-7, MPEG-21, MPEG-V, JPSearch, and TV-Anytime and served as a co-chair for Ad Hoc Groups on User Preferences, chair for Ad Hoc Group on MPEG Query Format, chair for Ad Hoc Group on MPEG-V, chair for Ad Hoc Group on JPSearch and chair for the Metadata Subgroup of ISO/IEC JTC1 SC29 WG1 (a.k.a. JPEG). He also served as an editor of various international standards such as ISO/IEC 15938-12, ISO/IEC 23005-2/5/6, and ISO/IEC 24800-2/5. He has co-authored over 40 conference and journal publications in the field of multimedia information systems. He is also a inventor/co-inventor of more than 30 US Patents and 70 Korean Patents.

Sang-Kyun Kim received the BS, MS, and PhD degrees in computer science from University of Iowa in 1991, 1994, and 1997, respectively. In 1997, he joined the Samsung Advanced Institute of Technology as a researcher. He was a senior researcher as well as a project leader on the Image and Video Content Search Team of the Computing Technology Lab until 2007. He joined Myongji University in 2007 as an assistant professor and is an associate professor in the Department of Computer Engineering since 2011. His research interests include digital content (image, video, and music) analysis and management, image search and indexing, color adaptation, mulsemedia adaptation, sensors & actuators, VR, and media-centric-IoT. He actively participated in the multimedia standardization activities such as MPEG-7, MPEG-21, MPEG-A, MPEG-V, as a co-chair and a project editor. He serves currently as a project editor of MPEG-V International

Standards, i.e. ISO/IEC 23005-2/3/4/5, and 23005-7. He has co-authored over 40 conference and journal publications in the field of digital content management and mulsemedia simulation & adaptation. He is also an inventor/co-inventor of more than 25 US Patents and 90 Korean Patents.

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Seungju Han is a senior researcher in Samsung Advanced Institute of Technology (SAIT) at Samsung Electronics, Korea. He received Ph.D. degree in electrical and computer engineering in 2007, from the University of Florida, USA. Since 2007, he has joined Samsung Advanced Institute of Technology as a research engineer. He participated in the development of standard such as ISO/IEC 23005 (MPEG-V) and ISO/IEC 23007 (MPEG-U), and served as the editor of ISO/IEC 23005-2/5. He has authored and co-authored over 25 research papers in the field of pattern recognition and human-computer interaction.

Marius Preda is Associate Professor at Institut MINES-Telecom and Chairman of the 3D Graphics group of ISO’s MPEG (Moving Picture Expert Group). He contributes to various ISO standards with technologies in the fields of 3D graphics, virtual worlds and augmented reality and has received several ISO Certifications of Appreciation. He leads a research team with a focus on Augmented Reality, Cloud Computing, Games and Interactive Media and regularly presents results in journals and at speaking engagements worldwide. He serves on the program committee international conferences and reviews top level research journals.After being part of various research groups and networks, in 2010 he founded a research team within Institut MINES-Telecom, called GRIN - GRaphics and INteractive media. The team is conducting research at the international level cooperating academic partners worldwide and industrial ICT leaders. Selected results are showcased on www.MyMultimediaWorld.com.Academically, Marius received a Degree in Engineering from Politehnica Bucharest, a PhD in Mathematics and Informatics from University Paris V and an eMBA from Telecom Business School, Paris. Users Review**From reader reviews:**
Patricia Thomas:This MPEG-V: Bridging the Virtual and Real World book is absolutely not ordinary book, you have after that it the world is in your hands. The benefit you get by reading this book is usually information inside this reserve incredible fresh, you will get information which is getting deeper anyone read a lot of information you will get. This MPEG-V: Bridging the Virtual and Real World without we recognize teach the one who studying it become critical in contemplating and analyzing. Don't be worry MPEG-V: Bridging the Virtual and Real World can bring if you are and not make your case space or bookshelves' turn out to be full because you can have it with your lovely laptop even phone. This MPEG-V: Bridging the Virtual and Real World having very good arrangement in word in addition to layout, so you will not really feel uninterested in reading.
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