

# **Submission Guidelines for IEEE Xplore<sup>®</sup> PDF Files with Multimedia or Supplemental Material**

**Version 1.1**

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**IEEE CONTENT ENGINEERING**



## Introduction

IEEE Xplore® supports three ways of associating multimedia or supplementary material<sup>1</sup> with an article<sup>2</sup>. These ways are:

1. **Compressed:** A PDF file with a single zip file associated with it. The zip file contains one or more files. (Section 2)
2. **Linked Component:** A PDF file containing links to “playable” files (e.g, mpeg, jpg, gif, mov files, etc.). (Section 3)
3. **Associated Component:** A PDF file with a group of associated files but without links from the PDF file. (Section 4)
4. **Graphical Abstract:** A concise, illustrative reflection of the content of an article (Section 5).

The remainder of the document provides an overview of the requirements for submitting multimedia and supplemental material.

**Section 6-**Recommended Supplemental Electronic Material File Types

**Section 7-**General Requirements for Supplemental Electronic Material

**Section 8-**Recommended File Size Limits

**Section 9-**Metadata Requirements

**Section 10-**Details of Summary and Readme Files

### 1. Compressed: Submitting Multimedia and Supplementary Material as a Zip file

IEEE currently only supports the zip format. With this option, the zip file is associated with the article and may contain any kind of supplemental information. The zip contains at least one folder so that when it is unzipped all the contents will extract to a single location (folder).

The zip file appears in the IEEE Xplore® table of contents:

Milano, Milan, Italy (2)	<b>Post-Contact, In-Hand Object Motion Compensation With Adaptive Hands</b>	Minas V. Liarokapis ; Aaron M. Dollar Publication Year: 2018, Page(s):456 - 467	Abstract   PDF (2537 KB)   HTML
Institute of Systems Engineering, Macau University of Science and Technology, Macau, China (2)	<b>Web Service Recommendation With Reconstructed Profile From Mashup Descriptions</b>	Yang Zhong ; Yushun Fan ; Wei Tan ; Jia Zhang Publication Year: 2018, Page(s):468 - 478 Cited by: Papers (1)	Abstract   PDF (1774 KB)   HTML
Department of Industrial Engineering and Management, School of Mechanical Engineering, Shanghai Jiao Tong University, Shanghai, China (2)	<b>An Automated Methodology for Worker Path Generation and Safety Assessment in Construction Projects</b>	Md Mahbubur Rahman ; Leonardo Bobadilla ; Ali Mostafavi ; Triana Carmenate ; Sebastian A. Zanlongo Publication Year: 2018, Page(s):479 - 491	Abstract   PDF (2343 KB)   HTML   <b>Media</b>
IBM Thomas J. Watson Research Center, Yorktown Heights, NY, USA (1)	<b>Leader-Follower Consensus of Multivehicle Wirelessly Networked Uncertain Systems Subject to Nonlinear Dynamics and Actuator Fault</b>	Bohui Wang ; Jingcheng Wang ; Bin Zhang ; Weisheng Chen ; Zhengqiang Zhang Publication Year: 2018, Page(s):492 - 505	Abstract   PDF (2342 KB)   HTML
Los Alamos National Laboratory, Los Alamos, NM, USA (1)			
Department of Automation, Tsinghua University, Beijing, China (1)			
Department of Automation, Shanghai Jiao Tong University, Shanghai, China (1)			
Department of Production Engineering and Management, Technical University of Crete, Chania, Greece (1)			
Department of Computer Science and Technology, Tsinghua University, Beijing, China (1)			
Key Laboratory of Advanced Process Control for Light Industry (Ministry of Education), Jiangnan University, Wuxi, China (1)			
School of Mechanical Engineering, Southeast University, Nanjing, China (1)			
School of Computing and Information Sciences, Florida International University, Miami, FL, USA (1)			
School of Engineering and Information Technology, University of New South Wales, Canberra, ACT, Australia (1)			

<sup>1</sup> The terms multimedia and supplemental material are used interchangeably unless otherwise stated.

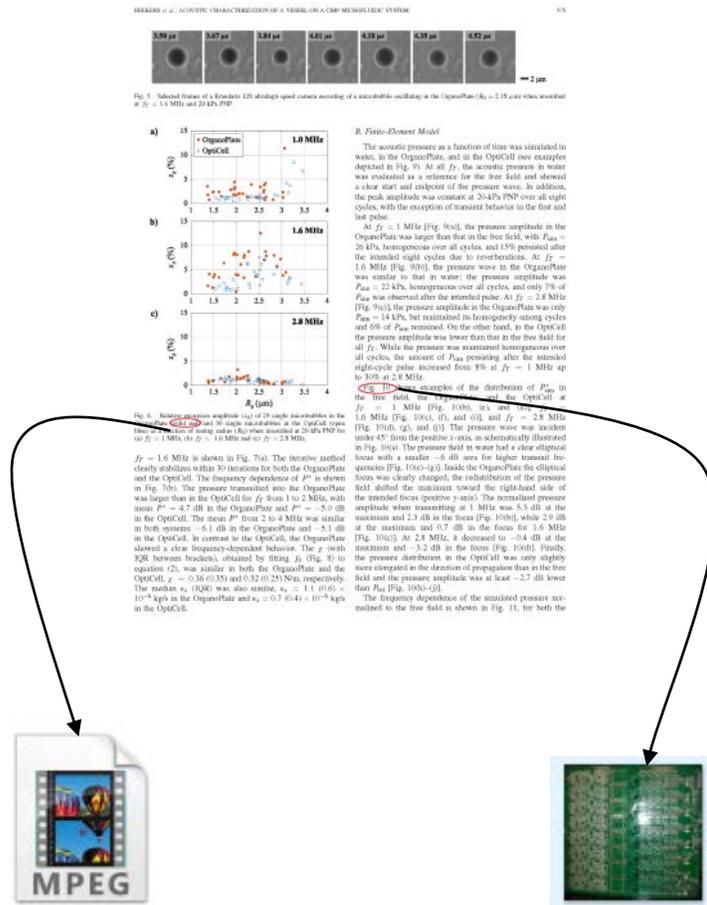
<sup>2</sup> Generally, an article is a PDF file. In some cases, the article may include an HTML version as well. In this document, the term article refers to the PDF version of the article.

The supplemental material is found by clicking on the “Media” icon shown on the previous page. After clicking on the “Media” icon you are then taken to the page where you can download the supplemental material.

If instead of clicking on the “Media” icon, you click on the paper title you are taken to the HTML version of the article (when available). Then click on the “Media” tab Doing so takes you to the download page.

## 2. Linked Component: Linking from a PDF to Playable Multimedia and Supplementary Material

With this option, there are links within the article PDF on IEEE Xplore® that point to “playable” files. The files are only playable if the IEEE Xplore® user has the appropriate application to view them. This is why IEEE suggests using certain file types as the files be linked to. This is shown in the diagram below:



IEEE converts each link<sup>3</sup> in the PDF file into a DOI. This makes the multimedia object discoverable through Crossref. All DOIs for the paper/article, and supplementary material **must be** assigned by the IEEE production system to ensure that the DOIs are unique

<sup>3</sup> Only those links with at least the minimum metadata and whose supplementary material resides on IEEE Xplore® will be preserved in this option. All other links, if present, are removed.

across all publications and to ensure the reliability and availability of the supplementary material in the future. It also facilitates production processing, and DOI deposit.

If an article has an HTML version each playable file can also be downloaded through the “Media” tab.

### 3. Associated Component: Associating a PDF to one or more Multimedia or Supplementary Material files

This option has features of the previous options. The main differences are:

1. The multimedia and supplementary files do not have to be in a zip file.
2. There are no links between the PDF file and the multimedia and supplemental file(s). Just like the Compressed option, you are taken to the download page.

Browse Journals & Magazines > IEEE Transactions on Ultrason... > Volume: 51 Issue: 6

< Previous | Back to Results | Next >

## Controlled ultrasound tissue erosion

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7 Author(s) | Zhen Xu ; A. Ludomirsky ; L.Y. Eun ; T.L. Hall ; B.C. Thomsen ; B. Fowkes ; C.A. Cain | View All Authors

Abstract | Authors | Figures | References | Citations | Keywords | Metrics | **Media**

Associated Files	Description	Type & Format	Size
Download	Description not available.	Other	1408317
Fig. 6 Download	A well-defined hole was created in the porcine atrial wall with a PD of 3 cycles and a PRF of 19.6 kHz.	Image/PG	173921

Files may be compressed to optimize download experience. If you have any problems downloading, please review our Media FAQ.  
If you have any problems downloading a file, please complete the Online Technical Support Form.

### 4. Graphical Abstract: Providing a Visual Summary of an Article

Use this option to capture a reader’s attention graphically. A graphical abstract is a concise, illustrative reflection of the content of an article; it can be an image, a video, an audio file, or a PowerPoint file. The graphical abstract should highlight the main point of an article and include a caption describing the image. A graphical abstract must undergo peer review.

The graphical abstract appears when you click on either (1) “Abstract” and then “View full abstract” or (2) “HTML”. Then the full abstract appears. At the bottom is the graphical abstract.

## 5. Recommended Supplemental Electronic Material File Types

The following file types are recommended for Compressed and Linked Components options.

Audio:	.aiff (older but still common Audio Interchange File Format) .au (Unix audio) .midi .mov (Quicktime audio) .mp3 .ra (Real Audio) .wav (Windows audio)
Video:	.asf and .wma (Microsoft Media Player) .avi (Microsoft's Audio-Video Interleaved) .gif (animated GIFs) .mpeg .mov (Quicktime)
Graphics:	.jpg (Joint Photographic Expert Group)

These file types can be changed as needed by the EICs, conference chairs, technical chairs, standard committee, or appropriate BIS staff.

## 6. General Requirements for Supplemental Electronic Material

Each caption in the paper or article describing a supplemental electronic material attachment *must include the size and type of attachment* for user convenience. Making sure that this information is included is an editorial responsibility. IEEE promises to include this information in all publications produced by its in-house staff.

All supplemental electronic material files will reside on IEEE Xplore® to ensure the long-term usefulness of the links or zip files

## 7. Recommended File Size Limits

The suggested maximum file size for the PDF file and the supplemental electronic material is 25 MB. This limit can be changed as needed by the EICs, conference chairs, technical chairs, standard committee, or appropriate eXpress Conference Publishing staff.

If supplying a graphical abstract<sup>4</sup> the *video file* (image and sound) must be <100 MB. If *audio only* the file must be <3 MB. Refer to [Prepare Supplementary Material](#) then click on the “Create Your Article” drop-down menu for additional requirements.

## 8. Metadata Requirements

For the Compressed option, the zip file must be accompanied by summary information. This information is displayed in IEEE Xplore®. It used by IEEE Xplore® users to understand at a high level what the supplemental material is about. Within the zip file there is also a readme.pdf or a readme.txt file that provides additional technical details and requirements for using the supplemental material.

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<sup>4</sup> A graphical abstract is a concise, illustrative reflection of the content of an article; it can be an image, a video, an audio file, or a PowerPoint file. The graphical abstract should highlight the main point of your article and include a caption describing the image.

Please see “**Details of summary and readme files**” (Section 9) at the end of this document for the specific details.

For the Linked Component option, DOI support requires submission of metadata in addition to supplemental electronic material. For in-house produced content IEEE staff will gather any missing metadata. For other content, it is the provider’s responsibility. IEEE will make tools available to help gather this information and provide other necessary instructions. Linking with the DOI in IEEE Xplore® will only be possible if the following metadata is provided.

1. Summary information about the component(s).
2. The file name of the supplementary electronic material.
3. The file type of the supplementary electronic material.
4. The platform(s) the supplementary electronic material runs on.

It may *optionally* include:

1. A component description.
2. A component title.
3. A list of component authors. These authors could be different from the paper’s authors.

Please see the documentation and online help file associated with the “Supplementary Material Metadata Capture” program for a complete metadata list.

## 9. Details of Summary and Readme Files

### 9.1. Summary Files

Each paper has an individual *SUMMARY* file giving an overview of the supplemental electronic material. The *SUMMARY* file has these characteristics:

1. The file **must be** in ASCII (text) *only* to facilitate automatic processing.
2. The file should be no longer than 5 sentences or approximately 25 to 50 words.
3. The name is “<paper-filename>.SUMMARY.txt”. Where “<paper-filename><sup>5</sup>” is the name of the paper without the extension. For example, in the file name “wave-propagation.doc” the “.doc” part is the extension<sup>6</sup>. The summary file for this paper is “wave-propagation.SUMMARY.txt”.

### 9.2. Readme Files

Each paper has an individual *README* file describing the supplemental electronic material for each paper. The *README* file has these characteristics:

1. The file is **either** in ASCII (text) or PDF format.
2. The name of the file is either “<paper-filename>.README.txt” or “<paper-filename>.README.pdf”, where “<paper-filename><sup>7</sup>” is the name of the paper without the extension. For example, in the file name “wave-propagation.pdf” The “.pdf” part is the extension<sup>8</sup>. The readme file for this paper is either “wave-propagation.README.txt” or “wave-propagation.README.pdf”.

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<sup>5</sup> The purpose of “<paper-filename>” is to uniquely identify each *SUMMARY* file. A different unique identifier (such as paper ID) may be used if so desired. However, the file must end in *SUMMARY.txt*.

<sup>6</sup> The extension is a standard set of endings that identify what type of file it is.

<sup>7</sup> The purpose of “<paper-filename>” is to uniquely identify each *README* file. A different unique identifier (such as paper ID) may be used if so desired. However, the file must end in either *README.txt* or *README.pdf*.

<sup>8</sup> The extension is a standard set of endings that identify what type of file it is.

The information contained in the *README* file consists of:

1. **Description:** An overall description of the supplemental electronic material and what the audience can expect to gain by downloading them;
2. **Size:** The total size of all supplemental electronic material, in kilobytes if less than one megabyte in size, or in megabytes if one megabyte or greater in size. This will allow IEEE to provide IEEE Xplore® users with information that will help them to make downloading decisions;
3. **Platform:** The platform required to use these files;
4. **Environment:** The environment needed (operating system, version, particular libraries, compiler versions, DLLs, etc.);
5. **Major Component Description:** A detailed description of the ZIP file's contents<sup>9</sup>;
6. **Detailed Set-up Instructions (if necessary):** These instructions should be in a step-by-step format, including information on how to perform any necessary set-up. For example: creating directories, copying/moving files into particular locations, etc.;
7. **Detailed Run Instructions (if necessary):** A set of detailed instructions on how to compile or run any program(s) associated with the supplemental electronic material or, any special set-up of the computer environment required, etc.;
8. **Output Description (if necessary):** A description of the expected output so users will know if they are seeing what the author intended;
9. **Contact Information:** The author should provide contact information in case users have questions regarding the extended material. This does not have to be the person who created the supplemental electronic material. For example a society's executive or editorial office. **IEEE will not provide any technical support beyond the basic help files and the readme file in IEEE Xplore®.**

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<sup>9</sup> At a minimum a list of all the files, except the IEEE required SUMMARY and README files, and each folder's contents in the ZIP file should be included.