

Multimedia Extensions

Multimedia (MM) extensions can include: video, image sequences, experimental data or code.

How to submit supplementary data/multimedia

Multimedia content will be published as an online "appendix" to the print content of the article. The Multimedia Table should appear as Appendix A – see below. For readers with access to an electronic version of the article, the index of multimedia extensions in the appendix will take the form of hyperlinks to facilitate access. The production details associated with inserting these links will be handled by the publisher – authors need only cite the multimedia appendix as they would cite any other appendix.

To facilitate review and publication of articles, authors are asked to electronically submit a single file (either as a compressed tar or ZIP file) containing both the electronic version of the paper (in PostScript or PDF format) along with the collection of files that form the multimedia content. Include a file named captions.txt that describes the included files in a format suitable for publication as captions for the multimedia content. The captions.txtfile will be used to produce an HTML document that references the associated multimedia content. The archive should use a minimum number of subdirectories to organize the included material, ideally having no more than one level of subdirectories.

In the first instance, anyone interested in submitting a Multimedia Paper should contact one of the Multimedia Editors to discuss their submission:

Tim Barfoot – tbarfoot@utoronto.ca

Jose Luis Blanco – jlblanco@ual.es

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How to refer to supplementary data/multimedia

Referring to Extensions in the body of the article

Within the text, we use the term 'Extension' in a similar way to the terms Figure or Table. Like Figures and Tables, the Extensions have ascending integer labels starting at 1. Some examples of usage:

- ...the results, see Figure 4 (Extension 1), clearly show that...
- ...the results, see Extension 1, clearly show that...

In the case where there is a one-to-one relationship between Extension and Table or Figure, then the caption of that Table or Figure may be:

- ...results from the experiment (see also Extension 3).

Do not write:

- Multimedia Extension 3
- Video Extension 3

There is no need for a one-to-one relationship between Figure or Table number and Extension number. For the electronic version of IJRR these Extension references will hyperlink directly to the online material.

The Extension Index Appendix

Each multimedia paper must have its first appendix titled "Appendix A: Index to multimedia Extensions". This is then followed by the index table which has 3 columns titled:

- Extension: The Extension number, natural numbers in ascending order.
- Media type. The type of media used for this extension, can be one of:
 - Image
 - Video
 - Audio
 - Data
 - Code
- Description: One or two lines of succinct descriptive material.

For the electronic version of IJRR, these index entries will hyperlink to an online version of the Extension index.

Appendix A: Index to Multimedia Extensions

Index to Multimedia Extensions

Extension Media Type Description

- 1 Images Stereo pairs used in this study
- 2 Images Comparative results for different matching measures
- 3 Data Comparative results expressed as matching rate
- 4 Images Matching validity and confidence measures
- 5 Images Application of constraints to remove invalid matches
- 6 Data Ambiguous match scores
- 7 Images Results of rank error prediction and actual rank errors

Web-page annotations

In general, the Extension link will point directly to the multimedia object, but in some cases it may be appropriate to augment the online multimedia material with text or HTML, which in turn points to the multimedia object. For example: some notes that describe in detail what is to be seen in a video, e.g., at time 0:15.20 we see that...

For an extension that is a collection of images, it might be appropriate to present a page of thumbnails, each of which links to the full resolution image. The thumbnail page may have brief explanatory notes as well as credits, some explanation of the format of a data file, e.g., column 1 contains... some explanation of the function/structure of code.

How to create and submit video(s)

IJRR accepts and reviews videos as multimedia extensions to papers accepted for publication in the Journal. The Journal wishes its Multimedia archive to provide a consistent, high quality resource for robotics researchers and each and every extension to be a valuable component of the paper. The video must, prima-facie, provide added value to the journal paper. It must visualize data and results in a way that could not be accomplished by figures embedded in the paper. Videos without a voice over or interstitial text are rarely effective and are often returned for revision. A single long video with multiple components is much less effective than multiple short videos that are clearly integrated with the paper text.

Please use the template that can be downloaded below – this template illustrates the sort of video that the Journal is expecting:

[Demonstration video](#)

Video Style

The video should open with a white-on-black title page held for a few seconds containing:

- The paper title
- The authors and their affiliations
- The video title
- The extension number
- A statement saying this is an IJRR Multimedia extension

Please note that the technical content of the demonstration video is not the point of this video and that we know of no author called Brian Brilliant or Edgar Excellent. This video was created with the “avisynth” scripting tool and compressed with a divx codec.

The title page should segue to a white-on-black summary page saying what the video is showing and placing the MM content within the context of the paper.

The technical content of the video should be well explained with the use of textual and/or audio annotation as required. Care should be taken to avoid compression artifacts that impinge on the scientific content of the video (and, by association, the paper); this is particularly problematic with blurring of line graphics including such as numbers on axes of graphs.

The video should end with a white-on-black slide of acknowledgements if and as required.

Video Properties

- At least 640 by 480 resolution and at least 20 fps
- The video compression should be of high quality
 - The Journal expects compression technology to evolve and so does not wish to be prescriptive over compression types. Today, H.264 codec in an MP4 or AVI contained is a good choice. MPEG-1 and MPEG-2 are portable, but have lower quality and larger files than the more modern codecs. We expect videos to be able to play on Windows XP, Linux and Mac so proprietary formats such as FLV are discouraged
- Note the MM editors reserve the right to request authors to change the compression codec before publication
- The title and summary slide should resemble that of the provided example video provided

- Videos should be below the 50MB mark and any video over this amount should provide a short preview to be hosted alongside the full file. Exceptions may be made at the discretion of the editors

Tips for good videos

- A good video must visualize data and results in a way that could not be accomplished by figures embedded in the paper
- Videos without a voice over or explanatory text (stand-alone frames or captions) are rarely effective and are often returned for revision
- A single long video with multiple components is much less effective than multiple short videos that are clearly integrated with the paper text. Use an extension just like you would a figure: each explains a particular point
- No music
- Video of a PowerPoint style presentation is not acceptable

How to cite supplementary data/multimedia

Any reference to supplementary data/multimedia should cite the journal article from which the data stemmed, example below:

Journal articles: Authors' last name and initials (year). Title of article. Name of journal, volume number (issue number): page numbers.

OR

Featherstone, R. (2005). Efficient factorization of the joint space inertia matrix for branched kinematic trees. *The International Journal of Robotics Research*, 24(6): 487–500.