(registered 2020-02-13, last updated 2022-09-20)

Media type name: model

Media subtype name: mtl

Required parameters: N/A

Optional parameters: N/A

Encoding considerations: 8bit

Security considerations: This media type does not allow for any kind of executable content. As such, the data elements currently defined in the MTL specification alone does not create security risks beyond the information disclosed. This format does not itself provided any form of integrity or confidentiality protection, so if such protection is needed it must be done externally, e.g., with HTTPs.

Interoperability considerations: The Material Library (MTL) file is a complement to the OBJ file. The MTL file establishes color information for a 3D geometry described in an OBJ file. The file format is well-established and well-adopted data format for exchange of 3D models between different software systems.

There are no known interoperability issues.

Published specification: Wavefront Technologies. 1992. Object Files (.obj), Advanced Visualizer

See also:
https://www.loc.gov/preservation/digital/formats/fdd/fdd000508.shtml

Applications which use this media: This media type is used in conjunction with the OBJ file format (n.b., the file can be independent of OBJ files and is human readable). The data consists materials instructions for geometry found in an OBJ dataset.

The applications that use (or would use) the media type model/mtl are those that display, create, edit, import, or export 3D model content using the OBJ standard. A short list of the applications include:

Blender (Open source, runs on Windows, Macintosh, Linux)
Cura (Ultimate BV, runs on Windows, Macintosh, Linux)
Geomagic Wrap (3DSystems, runs on Windows)
GrabCAD (browser-based)
*Instant Reality (Fraunhofer, runs on Windows, Macintosh, Linux)
Maya (Autodesk, runs on Windows, Macintosh)
Mimics (Materialise, runs on Windows)
3D Slicer (Open source, runs on Windows, Macintosh, Linux)
Simplify3D (Simplify3D, runs on Windows, Macintosh, Linux)

Fragment identifier considerations: Fragment identifiers must be encoded in utf-8.

Restrictions on usage: N/A

Additional information:

1. Deprecated alias names for this type: N/A
2. Magic number(s): N/A
3. File extension(s): mtl
4. Macintosh file type code: N/A
5. Object Identifiers: N/A

General Comments: This media type is intended to be referenced in
Supplement 208 (DICOM Encapsulation of OBJ Models for 3D
Manufacturing and Virtual RealityDICOM Encapsulation of OBJ Models
for 3D Manufacturing and Virtual Reality) of the DICOM standard.
The intent is for this supplement is to be published in the
January 2020 update of the standard.

References: DICOM Standards Committee, "Digital Imaging and
Communications in Medicine (DICOM)",
https://www.dicomstandard.org/current/

NOTE: The DICOM Standards Committee is an IESG recognized
organization.
https://www.iana.org/assignments/iesg-recognized-organizations

See Also: Library of Congress Sustainability of Digital Formats:
https://www.loc.gov/preservation/digital/formats/fdd/fdd000507.shtml

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Intended usage: Common

Author/Change controller:

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