

3MF completely replaces the need for STL, **OBJ and VRML** 



**FIND OUT MORE AT** http://3mf.io

# What is **3MF?**

3MF is a modern 3D printing file format designed with manufacturing in mind.



3MF allows design applications to send full-fidelity 3D models to a mix of other applications, platforms, services and printers.

3MF eliminates the issues with currently used file formats, and allows companies to focus on innovation, rather than on basic interoperability issues.



Full color and texture support in a single file



Support structures attached to part data



**3MF Advantages** 

Full tray support for direct machine preparation



Thumbnails, viewing and printing in Windows



Efficient storage of beam lattices



Multiple material support



Designed for industrial manufacturing



Native integration in Word and Powerpoint



## 3mf.io

## 3MF improves your typical workflow

#### **DESIGN PHASE**

3MF allows for the designer to provide all of the information and design intent that is necessary to produce a 3D printed part.

### BUILD PREPARATION

3MF natively enables efficient arrangement of parts on a build platform while maintaining workflow flexibility.

#### PRINT PREPARATION

Using the 3MF file format, the printer operator can map actual materials and support structures so the part will print correctly on the specific printer in use.

#### **PRODUCTION TRACKING**

3MF production extension enables manufacturing traceability by uniquely identifying all objects in the build platform.

#### **CUSTOM WORKFLOWS**

∎&

3MF's unique extensibility mechanisms allow enriching the data with custom manufacturing information. This enables integration of AM data into existing manufacturing workflows.

### Feature comparison

3MF is tailored for Additive Manufacturing. It addresses the challenging details of Additive Manufacturing workflows

	3MF	STL	OBJ	VRML
Always print-ready	$\bigcirc$	$\otimes$	$\otimes$	$\otimes$
Unit aware	$\bigcirc$	$\otimes$	$\otimes$	$\bigcirc$
Full color capability	$\bigcirc$	$\otimes$	$\bigcirc$	$\bigcirc$
Textures in one file	$\bigcirc$	$\otimes$	$\otimes$	$\otimes$
Tray support	$\bigcirc$	$\otimes$	$\otimes$	$\bigcirc$
Contains support structures	$\bigcirc$	$\otimes$	$\otimes$	$\otimes$
Unicode aware		$(\times)$	$(\mathbf{x})$	

## Wide adoption

3MF is already supported by your favorite 3D Printing application, including:

- 3D Systems 3DXpert and 3D Sprint
- Autodesk Fusion360, Meshmixer, and Netfabb
- Dassault Systemes
  CATIA / 3D-Experience and SolidWorks
- HP Jet Fusion 3D Printing Solution
- Materialise 3-matic and Magics

- Microsoft 3D Builder, Paint 3D, and Office 365.
- 오 РТС Сгео
- 💙 Rhino
- Siemens PLM Solid Edge and NX
- 오 Simplify 3D
- 🕑 Ultimaker Cura
- 📀 nTopology Element

## File size comparison

Based on open packaging conventions, its file size offers a compact representation of your 3D Printing Data. The following example consists of 320.000 triangles and includes support geometry.



Supported part

3MF	3.3 MB			
STL		15.6 MB		
OBJ			28	.8 MB
VRM	L	21.	21.5 MB	

## Backed by the industry

The 3MF Consoritum is a Joint Development Foundation project initiated by the most important players in the Additive Manufacturing Industry.

BOSYSTEMS	AUTODESK.	Sussemes	<b>e%</b> 5
FEEL SOUTH MANAGEMENT	<b>%</b>	Ø	materialise
Microsoft	nTopology	📚 ptc	shapeways*
SIEMENS		<b>strata</b> sys	) Ultimaker



## 3mf.io