

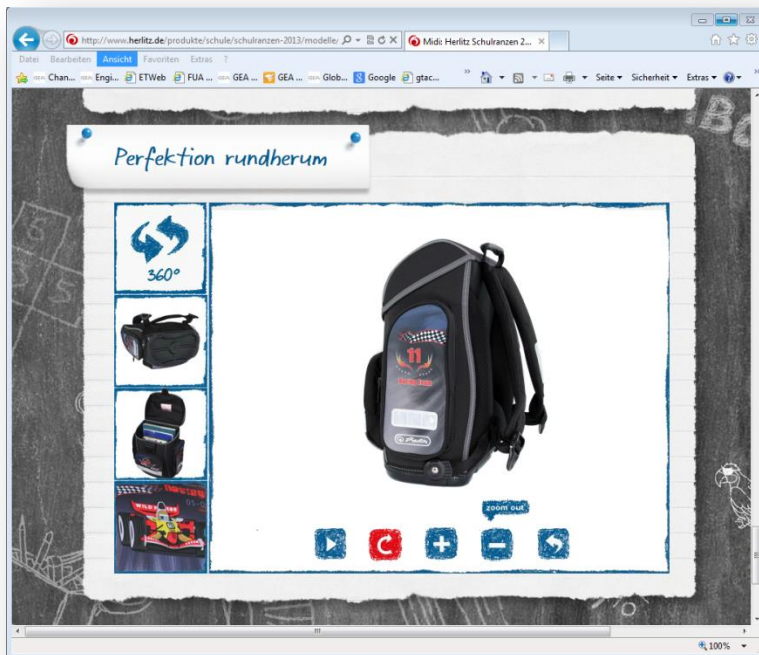
# Generate 360° web presentation from 3D CAD

Example Utilization of NX Render QTVR Export  
100170 CAE / TDM – Matthias Ahrens  
2013-09-17

GEA Farm Technologies

---

- Produce 360° views of 3D NX CAD data for web illustrations
- Those 360° views can be used in web shops or other illustrations for the internet
- With a HTML 5 browser those presentations do not need a special plugin on the client site.



# The Background

- Instead of exporting the entire product structure of a CAD model or the detailed geometric information via JT or other 3D visualization formats the 360° presentation only represent the view to the same product from various perspectives
- Therefore the risk of publishing engineering know-how via such 360° is nearly zero.

## 3D Visualization (e.g. JT) versus 360° presentation principle

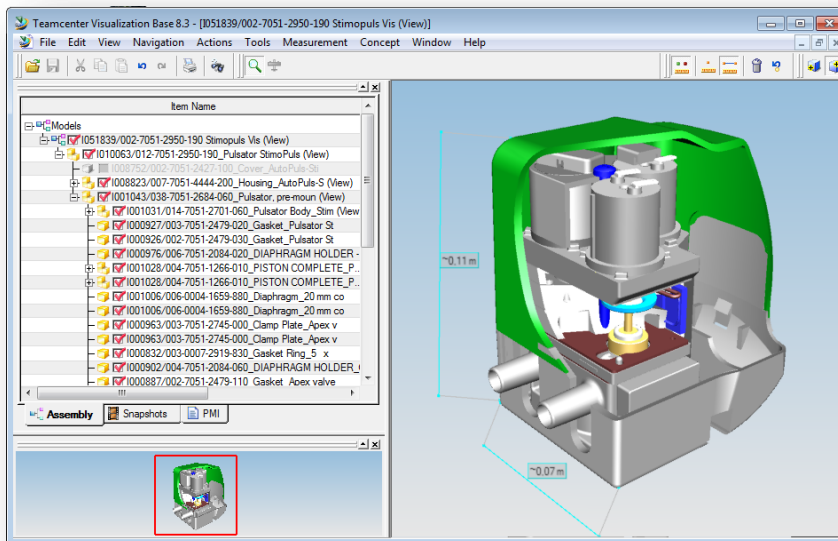
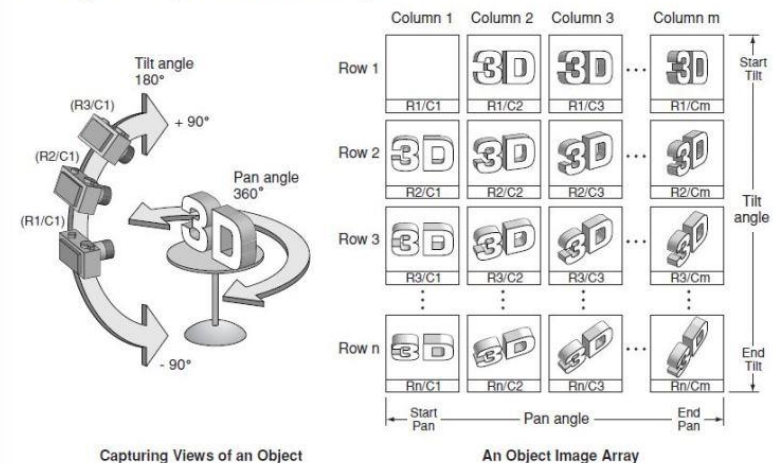
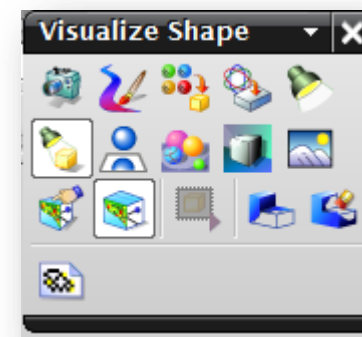
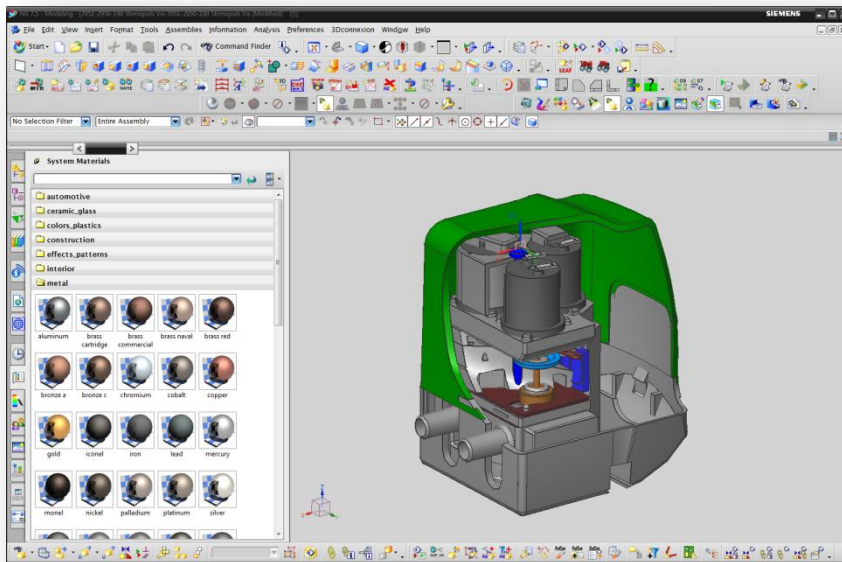


Figure 2-7 Images of an object from different tilt angles



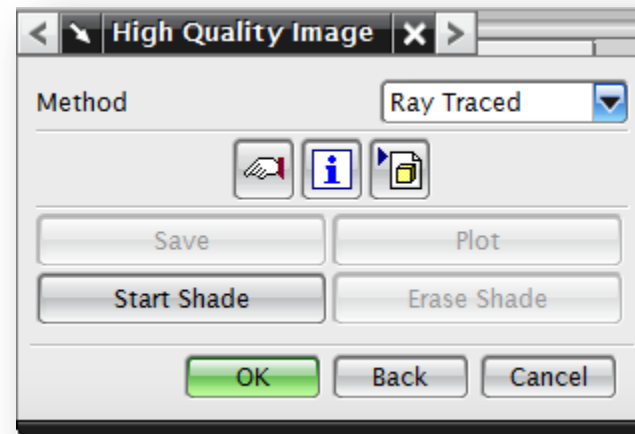
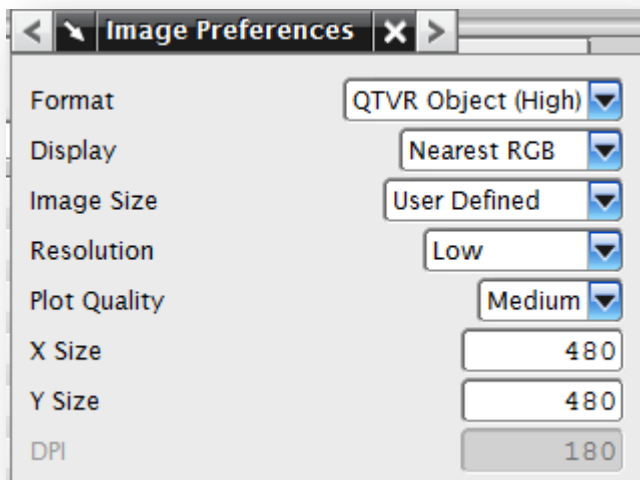
# Preparing the NX Photo - Process

- NX is using the LIGHTWORKS Design Ltd. render engine.
- Apply render – materials to the relevant solids resp. faces.
- Use the Visualize Shape tool bar and the “Cameras” to setup a correct render scene.



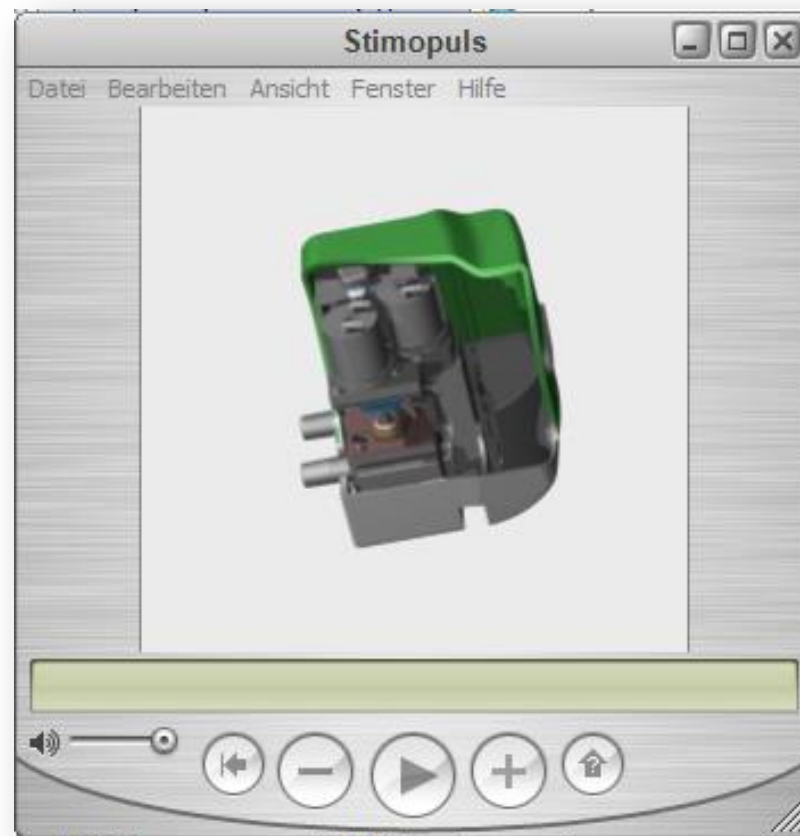
# Export to 360° (QuickTime Format)

- Set Image Preferences of High-Quality Image dialog to QTVR Object.
- QTVR Object (Low) produces  $9 \times 8 = 182$  views ( $20^\circ$  steps).
- QTVR Object (High) produces  $19 \times 38 = 684$  views ( $10^\circ$  steps).
- Take care for “Resolution” and “Image Size”. Set it to web and performance optimized values!
- Export QTVR .mov file by “Start Shade” command.



# Review 360° (QuickTime Format)

- With the old Apple QuickTime Plugin you can review the generated 360° views directly.



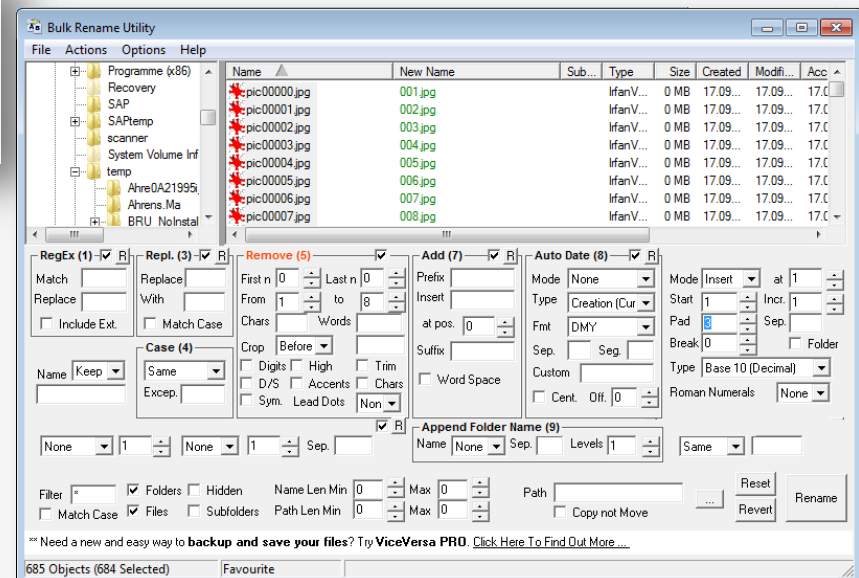
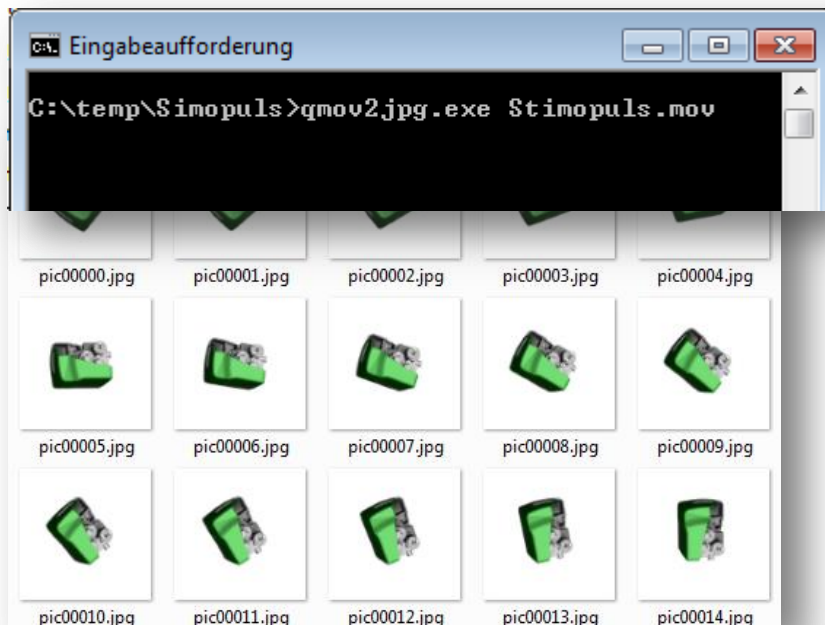
# Extract and rename images

- Use the qmov2jpg.exe extractor from Ken Silverman to extract all images from the QTVR .mov file to a local disc space.

<http://advsys.net/ken/kube/kube.htm>

- Use maybe tools like “Bulk Renaming Utility” to rename the image sequence to a logical order starting with image 001.jpg

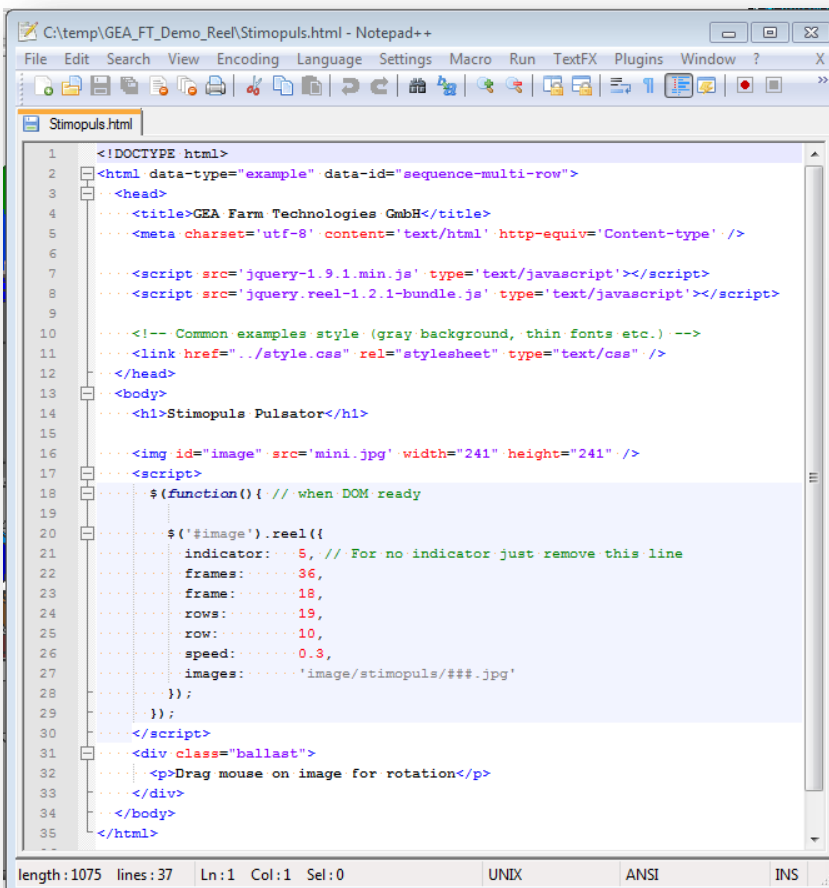
[http://www.bulkrenameutility.co.uk/Main\\_Intro.php](http://www.bulkrenameutility.co.uk/Main_Intro.php)





# Extract and rename images

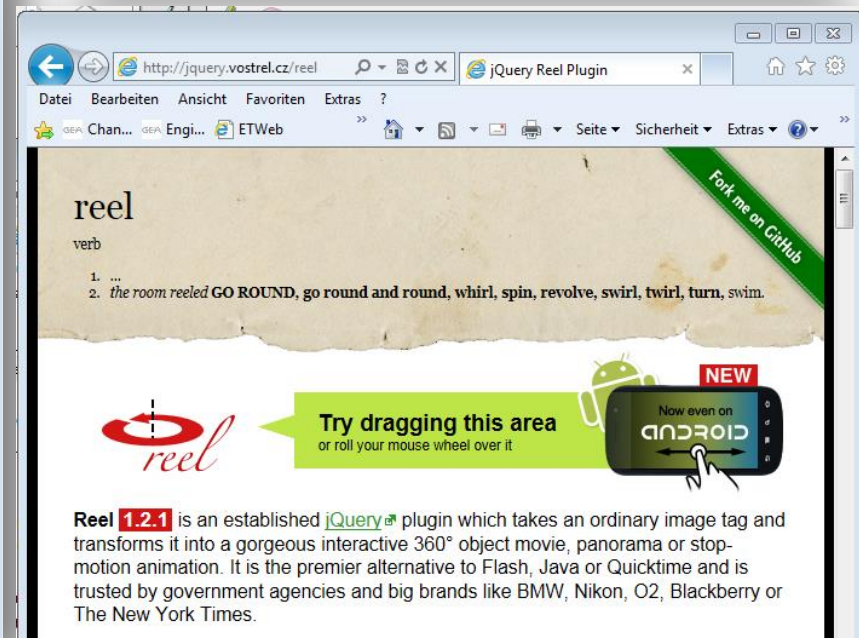
- Use the “reel” and “jquery” javascript plugins to generate an initial html web page. Take care for the image path/wildcard and frames/rows settings. <http://jquery.vostrel.cz/reel>



```
<!DOCTYPE html>
<html data-type="example" data-id="sequence-multi-row">
<head>
<title>GEA Farm Technologies GmbH</title>
<meta charset='utf-8' content='text/html' http-equiv='Content-type' />
<script src='jquery-1.9.1.min.js' type='text/javascript'></script>
<script src='jquery.reel-1.2.1-bundle.js' type='text/javascript'></script>
<!-- Common examples style (gray background, thin fonts etc.) -->
<link href='../style.css' rel='stylesheet' type='text/css' />
</head>
<body>
<h1>Stimopuls Pulsator</h1>

<script>
$(function() { // when DOM ready
  $('#image').reel({
    indicator: 5, // For no indicator just remove this line
    frames: 36,
    frame: 18,
    rows: 19,
    row: 10,
    speed: 0.3,
    images: 'image/stimopuls/###.jpg'
  });
});
</script>
<div class="ballast">
<p>Drag mouse on image for rotation</p>
</div>
</body>
</html>
```

Name	Änderungsdatum	Typ
image	17.09.2013 07:54	Dateiordner
jquery.reel-1.2.1-bundle.js	16.09.2013 12:16	JScript-Skriptdatei
jquery-1.9.1.min.js	16.09.2013 12:16	JScript-Skriptdatei
Stimopuls.html	17.09.2013 07:50	HTML-Dokument





# The Result

- With this converting path you can generate the basic image sequences for 360° views, which can be used in web shops, etc.

