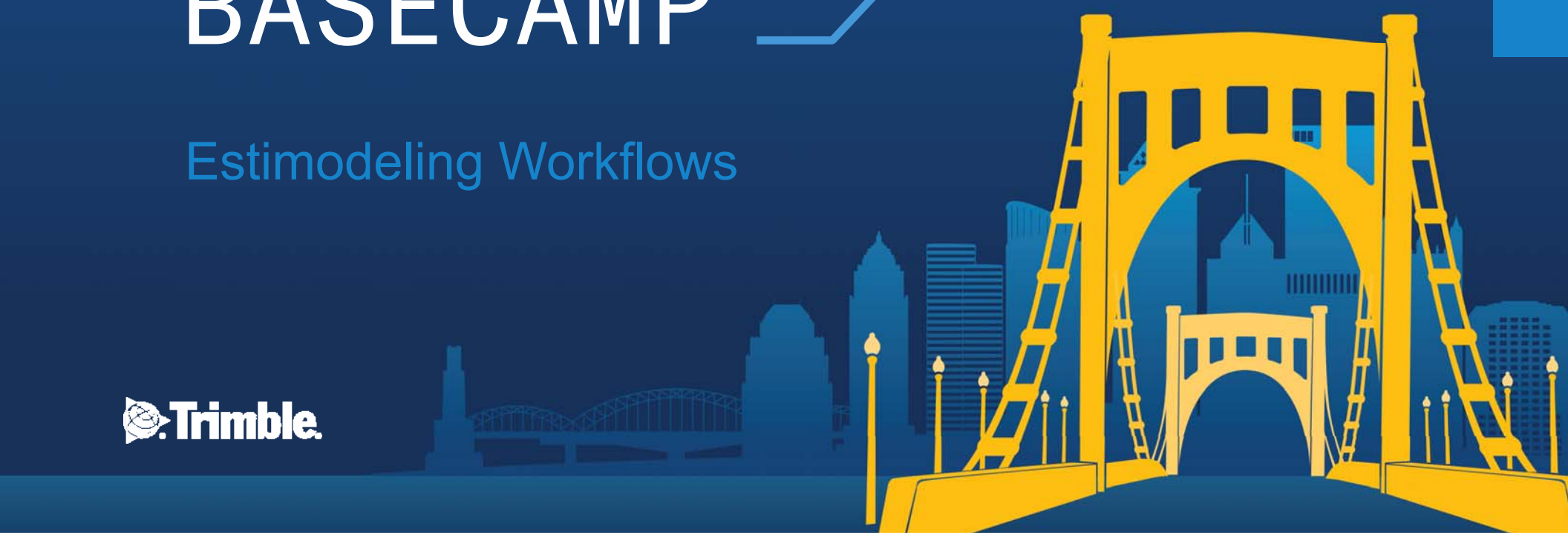
TEKLA BASECAMP

AUG.27-29

2019

Estimodeling Workflows



Trimble

Estimodeling Workflows

- Tekla PowerFab
  - Tekla EPM
  - Tekla EPM Go
  - Trimble Connect
  - Tekla EPM Modeler
- EPM Modeler
  - Parts (Beams, columns, bracing, etc)
  - Connections (Plate, angle, bolts, welds)
  - Reports
  - Project Management tools

- 3D model for
  - Estimating
  - Reports
  - Sequencing
  - Planning/Scheduling

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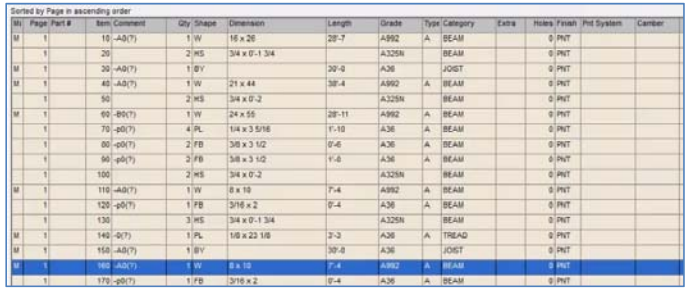
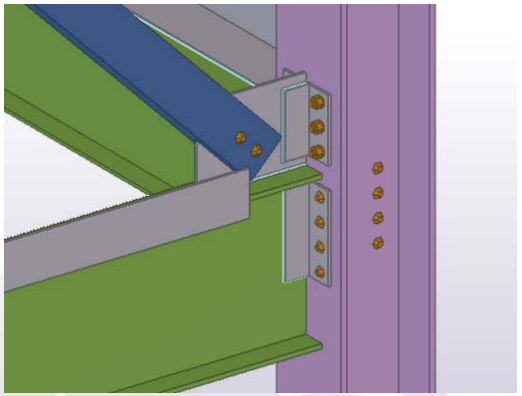
Why model-based estimating?

- Automatically populate material takeoffs
  - WYSIWYG; beams, columns, plate, decking, bolts, welds
  - Model as basic or detailed as you want
- Visualize complex framing
- Identify potential issues earlier
- Model can be passed to detailing/production for use or reference



Mk	Page	Part #	Item	Comment	Qty	Shape	Dimension	Length	Grade	Type	Category	Extra	Holes	Finish	Prd System	Camber
M	1		10	-A0(?)	1	W	16 x 26	28'-7	A992	A	BEAM		0	PNT		
	1		20		2	HS	3/4 x 0'-1 3/4		A325N		BEAM		0	PNT		
M	1		30	-A0(?)	1	BY		30'-0	A36		JOIST		0	PNT		
M	1		40	-A0(?)	1	W	21 x 44	38'-4	A992	A	BEAM		0	PNT		
	1		50		2	HS	3/4 x 0'-2		A325N		BEAM		0	PNT		
M	1		60	-B0(?)	1	W	24 x 55	28'-11	A992	A	BEAM		0	PNT		
	1		70	-p0(?)	4	PL	1/4 x 3 5/16	1'-10	A36	A	BEAM		0	PNT		
	1		80	-p0(?)	2	FB	3/8 x 3 1/2	0'-6	A36	A	BEAM		0	PNT		
	1		90	-p0(?)	3	FB	3/8 x 3 1/2	1'-0	A36	A	BEAM		0	PNT		
	1		100		2	HS	3/4 x 0'-2		A325N		BEAM		0	PNT		
M	1		110	-A0(?)	1	W	8 x 10	7'-4	A992	A	BEAM		0	PNT		
	1		120	-p0(?)	1	FB	3/16 x 2	0'-4	A36	A	BEAM		0	PNT		
	1		130		3	HS	3/4 x 0'-1 3/4		A325N		BEAM		0	PNT		
M	1		140	-0(?)	1	PL	1/8 x 23 1/8	2'-3	A36	A	TREAD		0	PNT		
M	1		150	-A0(?)	1	BY		30'-0	A36		JOIST		0	PNT		
M	1		160	-A0(?)	1	W	8 x 10	7'-4	A992	A	BEAM		0	PNT		
	1		170	-p0(?)	1	FB	3/16 x 2	0'-4	A36	A	BEAM		0	PNT		

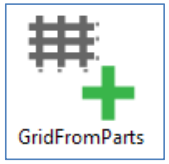


Methods

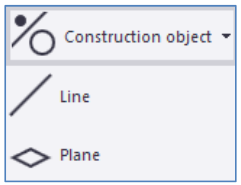
- Traditional – create using designs as a guide
- Tracing – import documents (PDF, DWG/DXF) and model over linework to generate 3D model
- Model import – IFC
  - Not all IFC models can be converted – ask for ‘coordination view’

Tools that can help

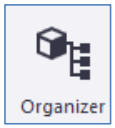
- Create grid from parts
  - Also works on the IFC file



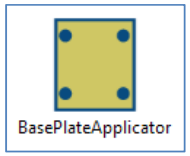
- Magnetic construction objects



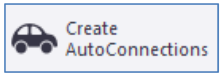
- Organizer – Review and edit converted parts



- Base plate applicator – quickly apply to all



- Autoconnection



  - For design, use partners like Qnect or GIZA

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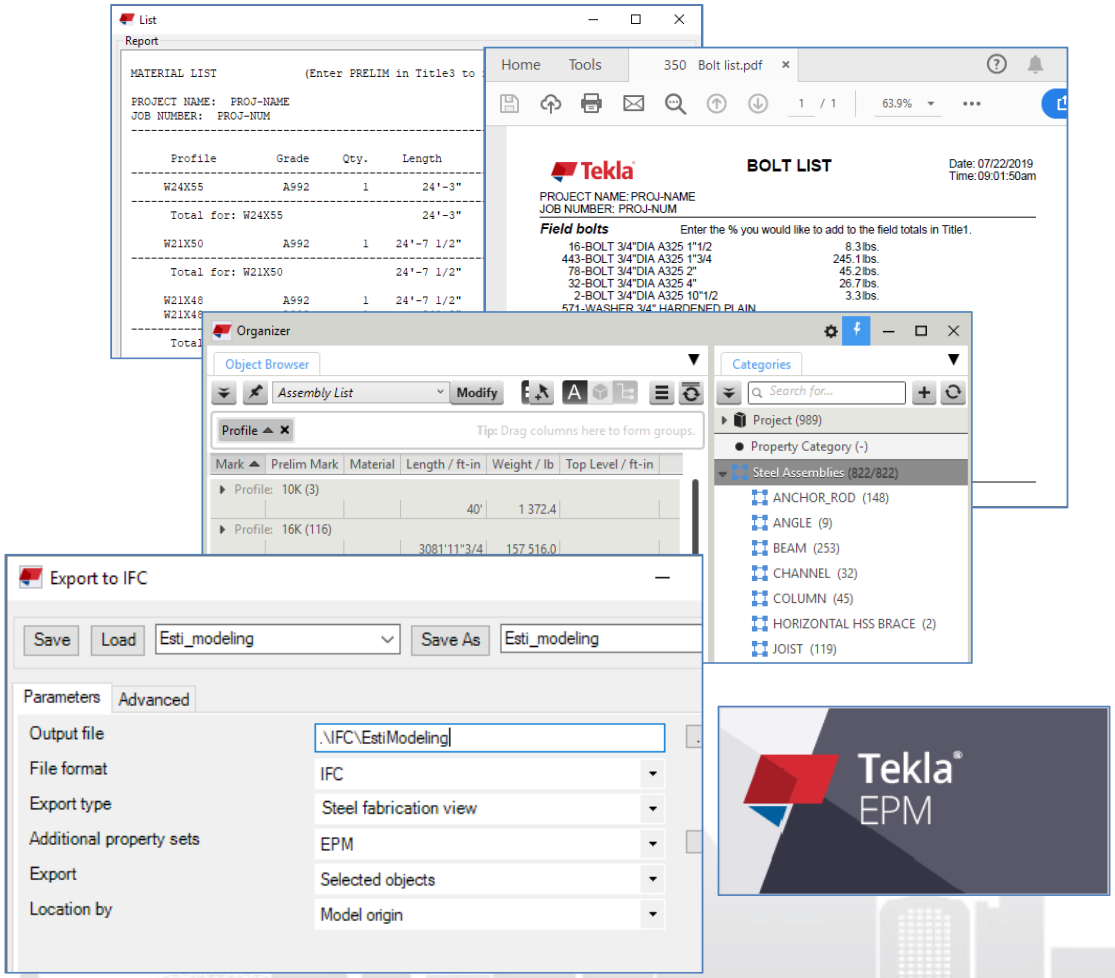
Things to watch for

- IFC not be ‘surface geometry’ or ‘reference’ IFC4
- Material grades often missing or incorrect
- Outside IFC connection material does not transfer to Tekla Structures (bolts, welds)
- Naming of objects important for better workflow

Now what?

- Reports
- Organizer
- Fabrication-level IFC



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