

Intelligent forms for the construction industry



Challenges

- Construction companies, developers, general contracting firms, and other construction-related businesses are under intense competitive pressure and are looking for ways to reduce operating costs.
- It is very important to reduce the margin of error during data acquisition, and eliminate the media discontinuity.
- Mobile co-workers should be better connected to internal processes to accelerate data acquisition and speed task completion.

Benefits of our solution for the construction sector

- The number of process steps during data acquisition is reduced
- Even if you are mobile – you have direct access to the latest data in the central system
- Also, data captured while mobile can be written directly into the inventory update system. Alternatively, you can cache the data locally and synchronize them with the inventory update system at a later time
- Process costs are reduced by handling the resulting tasks sooner.

Design Universe makes form-based digital data acquisition possible with the E-Pen&Forms line of products. Handwriting recognition substantially simplifies the complete filling of electronic forms.

The input takes place with a pen, whereby the handwriting is digitally captured and saved. The handwriting can be converted into typescript and be synchronized with the central system or a data base.

E-Pen&Forms Filler is more than just a tool for data acquisition

- **Work without paper using intelligent digital forms.** You can fill your forms directly on a Tablet PC by hand.
- **Very good ergonomics and acceptance.** The original layout is preserved.
- **Every size and format** of paper form can be used.
- **Specific functionalities** e.g. plausibility checks, digital signature and dependencies between fields can be used.

- **Connections to** databases, Excel, CRM-Software, construction industry software and real estate software are possible.
- **Import and Export** to many applications; e.g. all Office applications, CSV and XML; are available.
- **A smart form can be directly sent by email**
- **The direct synchronisation** of MS Outlook dates, tasks, reminders and contacts is available.

The handwriting on paper is digitally captured

While E-Pen&Forms Filler is used with Tablet PCs, alternatively the Digital Pad "E-Pen&Memo" can be used which stores handwriting on paper electronically. Of course the paper is preserved.

While the user writes on the paper, a digital copy is created, which is saved in the Digital Pad.

- The Digital Pad saves all handwriting, e.g. notes, drawings and filled paper forms.
- Up to 1000 forms can be stored in the Digital Pad.
- The Digital Pad can be used completely uncoupled from the PC.
- With a weight of 1.24 lbs the Digital Pad is extremely mobile.
- After the acquisition the handwriting can be transferred to a smart form on the computer and processed.
- The handwriting can be recognized in typescript using powerful recognition software.
- Like E-Pen&Forms Filler for the Tablet PC, the Digital Pad software has many available features such as plausibility checks, automatic calculations, connections to databases and numerous export capabilities.



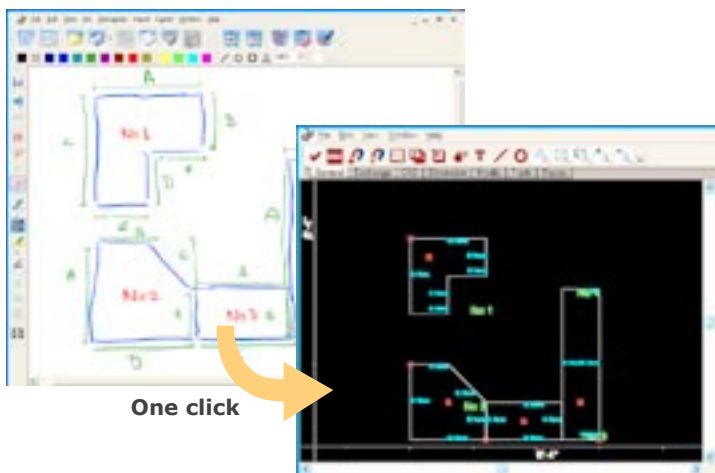


Revolutionary: Design your drawings on the Tablet PC as you are used to doing on paper.

All your CAD-Drawings are acquired by hand. Special recognition software transforms your handwriting into geometric design elements.

On location you can create a hand drawing, which can be transformed into an exact sketch by E-Pen&CAD by point-and-click.

With E-Pen&CAD you are able to speed up the acquisition of drawings and sketches very easily.



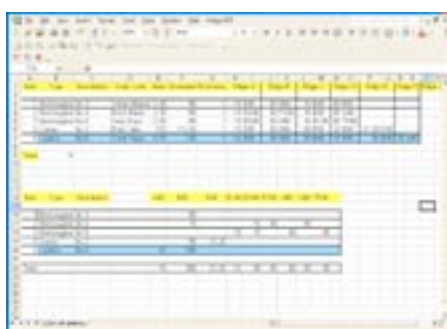
Besides the handwriting acquisition, a complete CAD system with specific functionalities is available, which is adapted for pen input.

Interface using Computer Aided Measurement (CAM) devices

Dimensions captured with a CAM device can be easily transferred over a special interface directly to the CAD software.

Export

After all drawing elements are acquired, the CAD-data can be exported as CSV, to Excel, as DWG-Drawing and DXF-Drawing.



- The geometric data (length, width, area, angles) of the shapes can be recognized, exported and displayed clearly arranged in forms.

Object	Type	Code	Area	Perimeter	Angle	Angle	Angle	Angle	Angle
No.1	Rectangle	Default	4	16	90	90	90	90	90
No.2	L-shape	Default	4	16	90	90	90	90	90
No.3	L-shape	Default	4	16	90	90	90	90	90
No.4	Triangle	Default	2	6	60	60	60	60	60
No.5	Circle	Default	2	3.14	360	360	360	360	360

- Calculations of any kind, based on the data in the database, can be done via smart forms.
- For further analysis the data of the CAD-drawing are automatically saved in a database.

CAD general	Area	Perimeter	CAD_Edge	Edge Length	CAD_Edge	Edge Length	CAD_Edge	Edge Length	CAD_Edge	Edge Length
No.1	4	16	1	4	2	4	2	4	2	4
No.2	4	16	1	4	2	4	2	4	2	4
No.3	4	16	1	4	2	4	2	4	2	4
No.4	2	6	1	2	1	2	1	2	1	2
No.5	2	3.14	1	2	1	2	1	2	1	2

CAD general	Area	Perimeter	CAD_Edge	Edge Length	CAD_Edge	Edge Length	CAD_Edge	Edge Length	CAD_Edge	Edge Length
No.1	4	16	1	4	2	4	2	4	2	4
No.2	4	16	1	4	2	4	2	4	2	4
No.3	4	16	1	4	2	4	2	4	2	4
No.4	2	6	1	2	1	2	1	2	1	2
No.5	2	3.14	1	2	1	2	1	2	1	2

- E-Pen&CAD can be used with Tablet PCs, PCs or laptops.
- The complete handling of E-Pen&CAD can be done by using a pen, e.g. the drawing or editing of design elements.
- You can choose predefined shapes from a database in order to create your drawing.
- Alternatively you can also create your own shapes.

Intelligent calculations, payoffs and ordering system

- E-Pen&CAD is not only a drawing tool but also an instrument for calculations and it includes interfaces to material procurement and to ordering.
- Due to the dimension of the design elements in the drawing and an exact specification of the required material, the costs of the material can be calculated.
- Via an interface the required material can be transmitted directly to the order form.
- Costs, which are based on the material consumption are also transferred to the order form and calculated.
- Using E-Pen&CAD media discontinuities are avoided and a good data flow is supported which saves time and money.

Product info:

www.design-universe.com/tabletpc.htm

Flash Demo and Training:

www.design-universe.com/demo.html

Evaluation software is available on request

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