

The Latest In Stat-Ease[®] 360 and Design-Expert Software

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October 2022

Agenda



- Our Software
- Recent Features
- Upcoming Features
- New License Options

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- **Our Software**
- Recent Features
- Upcoming Features
- New License Options

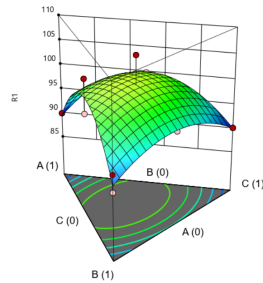
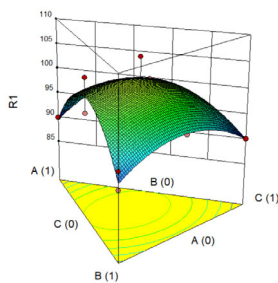
SE360 and DX

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DESIGN EXPERT



- Design-Expert (DX) has been a leading software package in the design and analysis of experiments (DOE).
- Originally developed in the mid-1980s by Pat Whitcomb, DX provides cutting-edge, easy-to-use tools that don't require lengthy, formal statistical training.



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Design-Expert Recent History



- Some highlights of our most recent releases:
 - **DX9 (2013)**
 - Split-plots and mixed models
 - **DX10 (2016)**
 - DX 64-bit available
 - Multicore support for computations
 - **DX11 (2017)**
 - Entire UI overhauled
 - Mac version available
 - **DX12 (2019)**
 - Logistic regression, multiple graphs, KCV models
 - **DX13 (2020)**
 - Poisson regression, multiple analyses, column rounding



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STAT-EASE 360



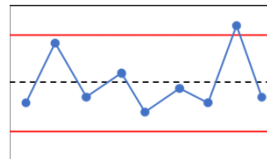
- Over the years, Stat-Ease has received steady requests for more advanced DOE tools.
- We've also received some demand for tools that are adjacent to DOE, such as design and analysis of computer experiments, Gage R&R (measurement systems analysis), more computing capabilities, statistical process control, and many more.
- In the interest of keeping Design-Expert as simple and accessible as possible, we had historically tabled these types of requests.
- Stat-Ease 360 (SE360) was released **October 4, 2021**.

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- It contains a **full copy** of Design-Expert software.
- The first release of SE360 **also** contains some of our most highly-requested advanced DOE features:
 - Optimal space-filling designs
 - Latin hypercube designs
 - Gaussian process models for zero-error data
 - Python scripting
 - Advanced classification tools for logistic regression

- Going forward, Design-Expert will continue to be targeted towards engineers, formulators, and others working in R&D. Remember, SE360 contains **all of DX**.
- Going forward, easy-to-use and bread-and-butter techniques will go into both DX and SE360.
- Highly-advanced, non-DOE, and highly technical & computational features will only go into SE360. Some ideas we have for the future:
 - Measurement Systems Analysis
 - Statistical Process Control
 - Multivariate Analysis
 - Advanced Scripting/Computing



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Recent Features



Here are some features that we recently added in Design-Expert 13 (released 2021):

- Factor Column Rounding
- Import Data
- Design Tree Reorganization
- **Other Features (Not Shown Today)**
 - Design Space Augment Wizard
 - Poisson Regression
 - Python Scripting (**SE360 Only**)

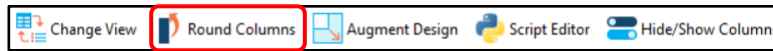
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Factor Column Rounding



Factor and mixture component columns can now be rounded automatically.



Component 1 A:A	Component 2 B:B	Component 3 C:C
0	0	1
0.500257	0	0.499743
1	0	0
0	0.495161	0.504839
0.169478	0.167041	0.663481
0.661844	0.16341	0.174746
0.495061	0.493342	0.0115966
0	1	0



Component 1 A:A	Component 2 B:B	Component 3 C:C
0	0	1
0.5	0	0.5
1	0	0
0	0.5	0.5
0.17	0.17	0.66
0.66	0.16	0.18
0.5	0.49	0.01
0	1	0



Software Demo

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Import Data



Data can now be pasted into SE360 and DX quickly and easily.

Day	Time minutes	Temp deg C	Catalyst %	Conversion %	Activity
Day 1	40	80	2	74	53.2
Day 1	40	90	3	66	59.8
Day 1	45	85	2.5	75	60.4
Day 1	45	85	2.5	83	60.6
Day 1	50	90	2	70	62.6
Day 1	45	85	2.5	76	59.1
Day 1	40	90	2	88	53.4
Day 1	50	90	3	97	67.8
Day 1	50	80	3	90	67.9
Day 1	45	85	2.5	81	59.2
Day 1	40	80	3	71	57.3
Day 1	50	80	2	51	62.9
Day 2	53.40896	85	2.5	79	65.9
Day 2	36.59104	85	2.5	76	53.8
Day 2	45	85	2.5	91	58.9
Day 2	45	85	1.6591	55	57.4
Day 2	45	85	1.340896	81	63.2
Day 2	45	93.40896	2.5	97	60.7
Day 2	45	85	2.5	80	60.8
Day 2	45	76.59104	2.5	85	60



Block	Run	Factor 1 A:Time minutes	Factor 2 B:Temp deg C	Factor 3 C:Catalyst %	Response 1 Conversion %	Response 2 Activity
Day 1	1	40	80	2	74	53.2
Day 1	2	40	90	3	66	59.8
Day 1	3	45	85	2.5	75	60.4
Day 1	4	45	85	2.5	83	60.6
Day 1	5	50	90	2	70	62.6
Day 1	6	45	85	2.5	76	59.1
Day 1	7	40	90	2	88	53.4
Day 1	8	50	90	3	97	67.8
Day 1	9	50	80	3	90	67.9
Day 1	10	45	85	2.5	81	59.2
Day 1	11	40	80	3	71	57.3
Day 1	12	50	80	2	51	62.9
Day 2	13	53.409	85	2.5	79	65.9
Day 2	14	36.591	85	2.5	76	53.8
Day 2	15	45	85	2.5	91	58.9
Day 2	16	45	85	1.6591	55	57.4
Day 2	17	45	85	1.3409	81	63.2
Day 2	18	45	93.409	2.5	97	60.7
Day 2	19	45	85	2.5	80	60.8
Day 2	20	45	76.591	2.5	85	60

- NEW DESIGN
- OPEN DESIGN
- IMPORT DATA**
- DESIGN WIZARD



Software Demo

SE360 and DX

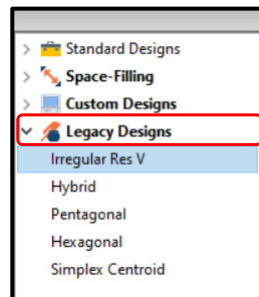
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Design Tree Reorganization



DX13 re-organized the design tree to make the software easier to use.

- Certain designs are used very rarely nowadays due to superior alternatives
- The design tree was growing too big – some users started to feel overwhelmed!



Software Demo

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Upcoming Features



Here are some features will appear this fall:

- Interval Shading
- Analysis Summary
- Custom Graphs
- Random Blocks (SE360 Only)
- Excel Import Wizard (SE360 Only)

Also Note: New Release Scheme!

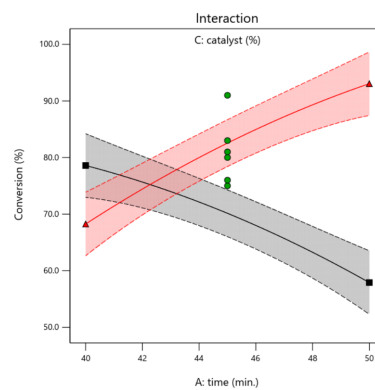
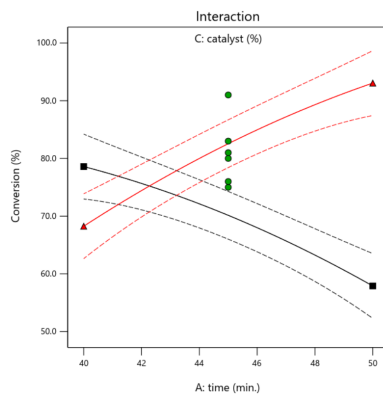
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Shaded Intervals



You'll now be able to draw plots with shaded confidence bands:



Software Demo

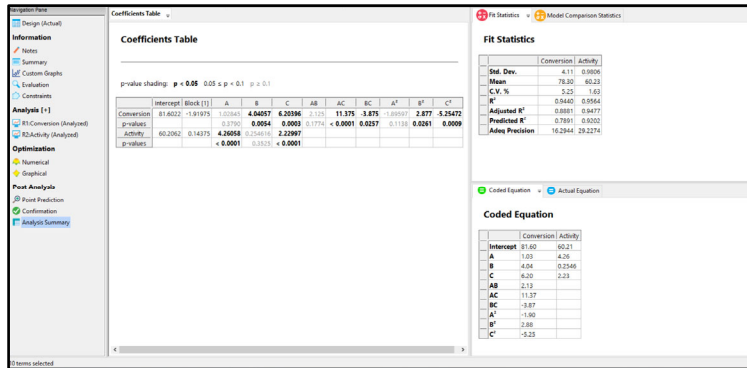
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Analysis Summary



Statistics from multiple analysis can now be compared in a single view:



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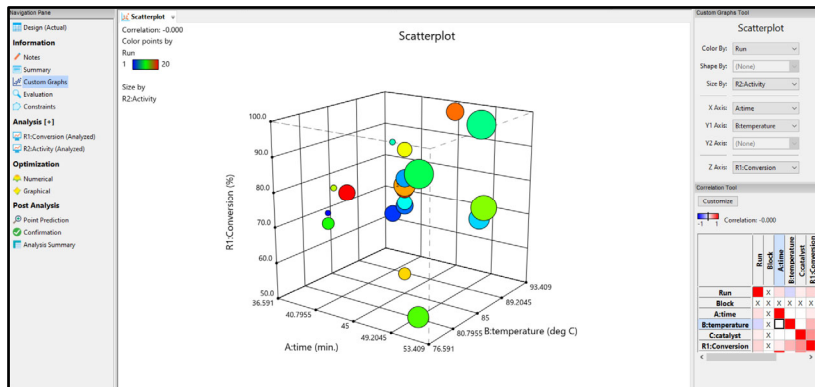
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Custom Graphs



You'll now have flexibility to generate much more sophisticated graphs:



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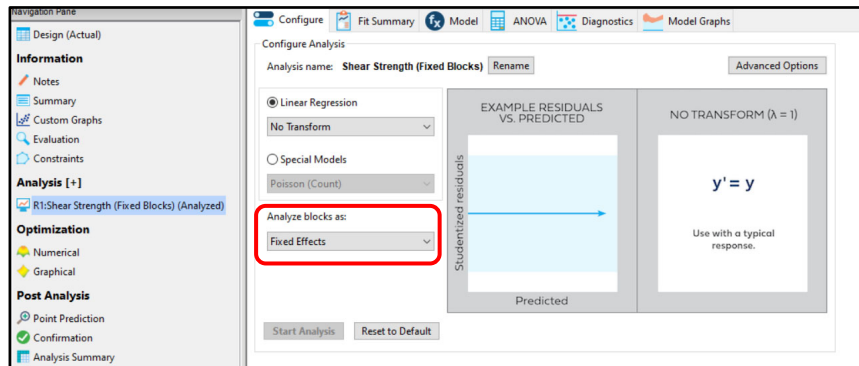
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Random Blocks



Blocks can be treated as either fixed or random effects in SE360:



Software Demo

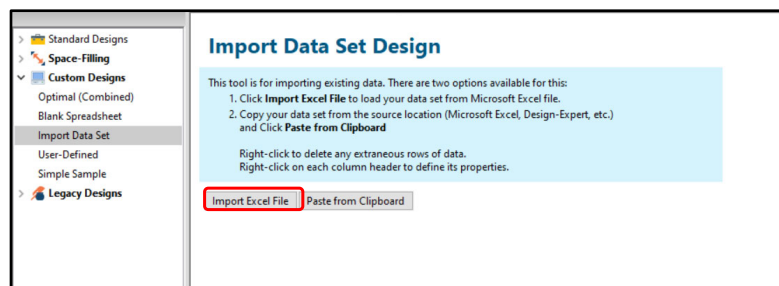
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Excel Import Wizard



Excel data can be imported directly into SE360:



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New License Options



- A new Hosted License Solution is coming shortly.
- A hosted license works like a network license, except that the license manager is handled by Stat-Ease.
- SE does not receive any user data.
- A great option for small teams with limited IT resources.
- For more information, contact sales@statease.com

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*Make the most from every experiment!*SM

Thanks for listening!

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