

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

Martin Bezener, PhD
President & Chief Technology Officer
martin@statease.com

October 2023

Agenda



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



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



- 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



- Stat-Ease® 360 (SE360) contains a **full copy** of Design-Expert software – you don't need to buy both software packages.
- SE360 is essentially a “pro” version of DX.
- Going forward, DX will continue to be targeted towards engineers, formulators, and others working in R&D. Remember, SE360 contains **all of DX**.
- Easy-to-use and bread-and-butter techniques and usage enhancements will go into both DX and SE360.
- Highly-advanced, non-DOE, and highly technical & computational features will only go into SE360.

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Recent Features (DX13 and SE360 v1)



Here are the main features that were added in Design-Expert 13 Stat-Ease 360 v1 (**released 2021**):

- Poisson Regression
- Modify Design Space Wizard
- Factor Column Rounding
- Import Data
- Multiple Analyses
- Python Scripting ✓ SE360 Exclusive!
- Space-Filling Designs ✓ SE360 Exclusive!
- Gaussian Process Models ✓ SE 360 Exclusive!

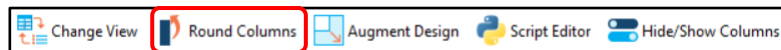
SE360 and DX

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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

SE360 and DX

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Import Data



Data can 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 | 53.6 |
| Day 2 | 45 | 85 | 2.5 | 91 | 58.9 |
| Day 2 | 45 | 85 | 1.659104 | 55 | 57.4 |
| Day 2 | 45 | 85 | 3.340896 | 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 ATime minutes | Factor 2 BTemp deg C | Factor 3 CCatalyst % | 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 | 53.6 |
| 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 | 3.3409 | 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

Recent Features (DX and SE360 v22)



Here are the main features that were added in Design-Expert and Stat-Ease 360 v22 (released 2022):

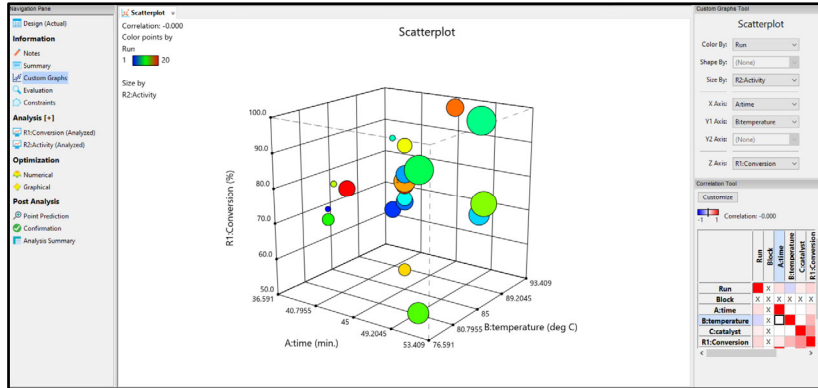
- Custom Graphs
- Analysis Summary
- Shaded Intervals
- Random Blocks ✓ SE360 Exclusive!
- Excel Import/Export ✓ SE360 Exclusive!

SE360 and DX

Custom Graphs



You now have flexibility to generate much more sophisticated graphs:



Software Demo

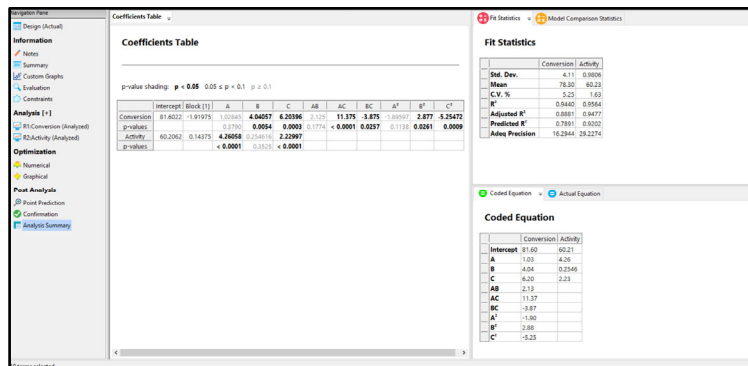
SE360 and DX

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Analysis Summary Improvements



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



Software Demo

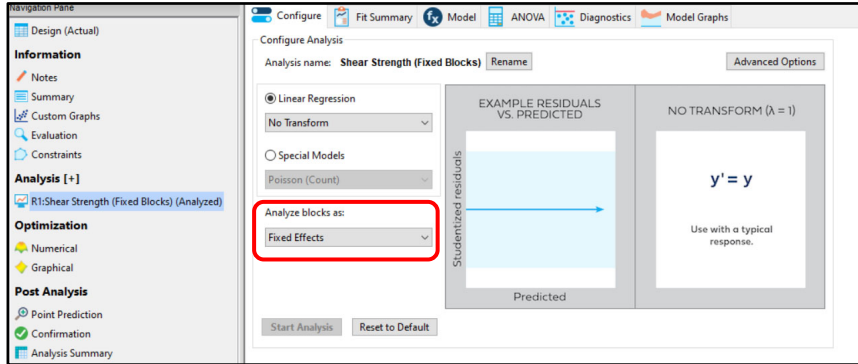
SE360 and DX

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Random Blocks



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



Software Demo

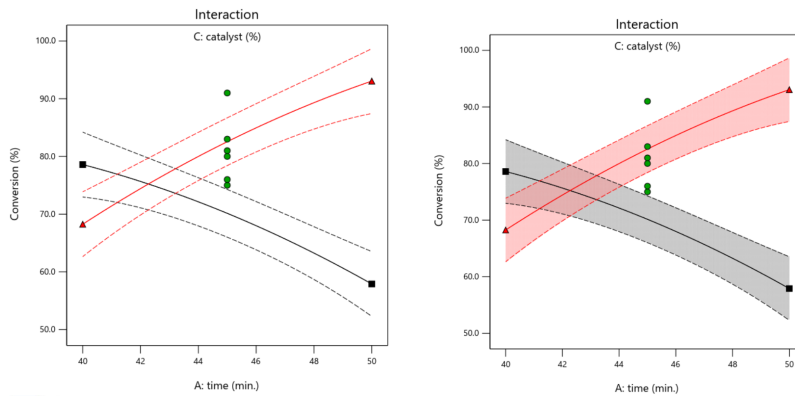
SE360 and DX

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Shaded Intervals



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



Software Demo

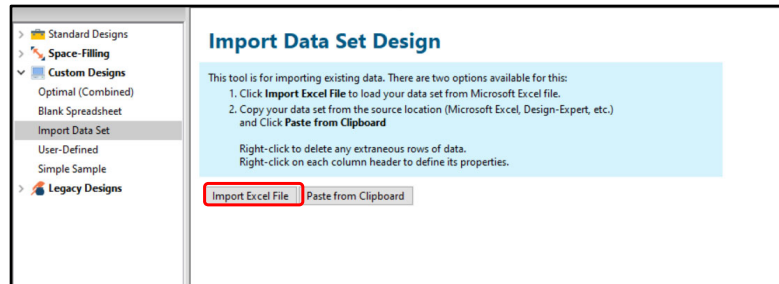
SE360 and DX

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Excel Import Wizard



Excel data can be imported directly into SE360:



Software Demo

SE360 and DX

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SE360 and DX

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Future Features (DX and SE360 v23)



Here are the main features that were added in Design-Expert and Stat-Ease 360 v23 (**to released late 2023**). A beta version of this software is currently available.

- Transpose Tables
- Analysis Summary Enhancements
- Gaussian Process Model Enhancements ✓ **SE360 Exclusive!**
- Reliability Tools via DexPy ✓ **SE360 Exclusive!**

SE360 and DX

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Transpose Tables



You'll now be able to rotate any output table in the software:

The screenshot shows a 'Coefficients Table' with a context menu open. The 'Transpose' option is highlighted with a red box. An arrow points to the resulting transposed table.

| | Conversion | p-values | Activity | p-values |
|----------------|-----------------|--------------------|----------------|--------------------|
| Intercept | 81.6022 | | 60.2062 | |
| Block [1] | -1.91975 | | 0.14375 | |
| A | 1.02845 | 0.3790 | 4.26058 | < 0.0001 |
| B | 4.04057 | 0.0054 | 0.254616 | 0.3525 |
| C | 6.20396 | 0.0003 | 2.22997 | < 0.0001 |
| AB | 2.125 | 0.1774 | | |
| AC | 11.375 | < 0.0001 | | |
| BC | -3.875 | 0.0257 | | |
| A ² | -1.89597 | 0.1138 | | |
| B ² | 2.877 | 0.0261 | | |
| C ² | -5.25472 | 0.0009 | | |



Software Demo

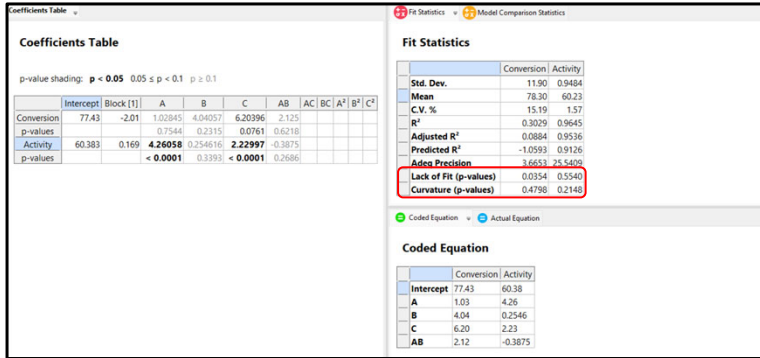
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Analysis Summary Enhancements



The Analysis Summary now contains extra information:

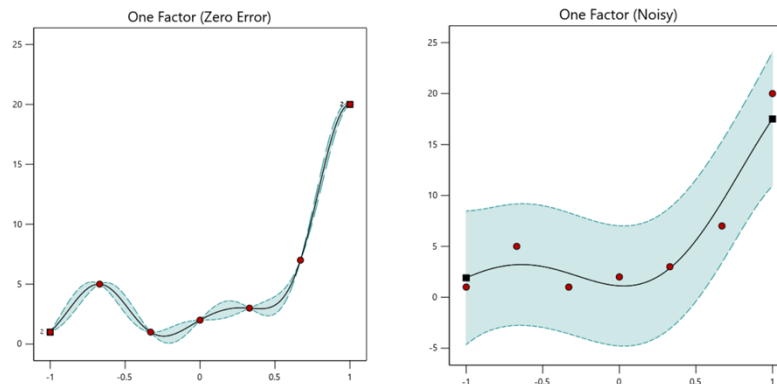


SE360 and DX Software Demo

Gaussian Process Model Enhancements



You can now fit GPMs to noisy data:



Software Demo

SE360 and DX

Very Future Features (v24)



We are currently planning features for DX and SE360 v24, scheduled to be released in 2024. Please send suggestions and requests if you have any!

Tentative features include:

- Alias Optimal Designs
- Upfront Design Evaluation for RSMs and Mixtures
- Split-split Plot Designs ✓ **SE360 Exclusive!**
- Strip-plot Designs ✓ **SE360 Exclusive!**

SE360 and DX

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SE360 and DX

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New License Options



- A new Hosted License Solution is now available.
- A hosted license works like a network license, except that the license manager is handled by Stat-Ease.
- Stat-Ease does not receive any user data. It is all stored on your local machine.
- A great option for small teams with limited IT resources.
- For more information, contact sales@statease.com

SE360 and DX

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StatEase
statistics made easy[®]

Make the most from every experiment!SM

Thanks for listening!

martin@statease.com