Jetzt noch besser - Was ist neu in MATLAB?

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Introducing the New MATLAB Desktop
MATLAB Toolstrip
Find what you need

- Tabs organize commonly used functionality
- Functionality only appears when needed
- Quick Access Toolbar for commonly used commands
What are MATLAB Apps?

- Interactive MATLAB programs that include a GUI
- MATLAB Apps Gallery makes it easy to find and launch apps

- Apps are included in many MATLAB products
- There are also many user-written apps
Getting More Apps

MATLAB Apps

Finding, creating, and sharing MATLAB apps

MATLAB® apps are interactive applications built on MATLAB. They can be included in some MATLAB products. The MATLAB Toolstrip shows you the apps that come with your product. The MathWorks Apps app shows you other apps: through the MATLAB community, through MathWorks, and through other companies. Apps can be downloaded or installed.

Getting Apps

Apps from the MATLAB Community
You can find user-contributed MATLAB apps on the MathWorks File Exchange. MATLAB apps can be installed into your apps folder. You can also download an app, install it in your apps folder, and run it.

Explore Apps on MATLAB File Exchange

Math, Statistics, and Optimization Apps

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Math, Statistics, and Optimization

Control System Design and Analysis

Signal Processing and Communications

Image Processing and Computer Vision

MATLAB EXPO 2013
Import Tool

- Interactive import of
  - Delimited and fixed-width text files
  - Excel sheets
  - Database tables

- Improved handling of
  - Mixed numeric and text data
  - Dates

- Define rules for handling non-numeric values

- Automatically generate MATLAB code (scripts or functions) to automate the process
Command Line Suggestions

- Suggested corrections for mistyped functions and variables in the Command Window

```matlab
>> datstr(Date(1))
Undefined function 'datstr' for input arguments of type 'double'.

Did you mean:
>> datestr(Date(1))
ans =
01-Jan-2005 01:00:00
```

- Press Enter to execute the suggested command, or Esc to delete it
Documentation Center and Redesigned Help

- Content organized by topic rather than content type

- Browser-like interface, with improved search
  - Persistent table of contents (13a)
  - Multiple tabs
  - Search term highlighting
  - Facets allow users to filter search results
MATLAB
Unit Testing Framework

- **matlab.unittest package**

- xUnit-style testing framework for the MATLAB language
  - Allows writing and running unit tests, and analyzing test results
  - Includes a set of readily available qualification methods
  - Supports automation, and provides easy reuse of test-cases
MATLAB Production Server

- Directly deploy MATLAB programs into production
- Scalable & reliable, low latency
- Use with web, database & application servers
Phased Array System Toolbox
Design and simulate phased array signal processing systems

- R2012b
  - FM Continuous Waveform (FMCW) generation and processing
  - MATLAB Compiler support

- R2013a
  - Polarization support for antennas, arrays, and targets
  - Three new MATLAB apps
Other Updates - Examples

- **Image Processing Toolbox**
  - Image segmentation using active contours
  - C code generation for ten functions
  - GPU acceleration for eleven functions

- **Statistics Toolbox**
  - Support vector machines (SVMs) for binary classification, PCA algorithms for missing data, and Anderson-Darling goodness-of-fit test

- **Financial Instruments Toolbox**
  - Calibration and Monte Carlo simulation for Hull-White, Linear Gaussian, and LIBOR market models
Learn More

Key Takeaways

- R2012b & R2013a: Two important new Releases of MATLAB
- Enhancements to Usability, Discoverability and Documentation for Increased Productivity
- New Tools, New Capabilities, Great New Experience