

# Graphics Library

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SYNERGY 2019  
CRUISING TO NEW HORIZONS

# Agenda

- Purpose
- History
- Examples
- Release



# Purpose

- To display images other than BMP and ICO
  - Use of GDI+
  - Image data may come from a file on disk or a binary table.column
- Drawing on a canvas
  - Windows only

# History

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Overview since 'New Orleans'

# History

- Introduced as a library for DataFlex 14
  - Two main classes
    - cImageContainer
    - cdbImageContainer
  - Stage: Beta, expected full release with DataFlex 15

# History – Version 2.0 (DataFlex 15.0)

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- Extended with demo workspace
  - ImageGallery
  - Datademo
- Added support for animated GIFs
- Added image property support
  - EXIF information
- Support for tooltips

# History – Version 2.1 (DataFlex 15.1)

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- Only tested and released, no changes

# History – Version 2.2 (DataFlex 16.0)

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- Small bug fixes
  - Changed\_state
  - First record display
  - ...



# History – Version 2.3 (DataFlex 16.1)

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- TIFF and Animation fix
- Library rename
- Added ImagePixelFormat function and constants

# History – Version 2.4 (DataFlex 17.0)

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- No longer needs conversions library
- Key assignments for zooming
- Added control over showing / hiding scrollbars
- Lined up some structs with DataFlex structs
  - Removed unnecessary struct declaration code

# History - Version 2.5 (DataFlex 17.1)

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- New DPIX / DPIY functions
  - Makes conversion of pixels to inches possible
- Replaced dbGrid with cdbCJGrid in datademo example
- Show scrollbars checkbox option in image gallery example

# History – Version 2.6 – DataFlex 18.0

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- Can load / save database column based image data
  - Added SaveImageToFile and SaveImageToStream
- Images can be rotated
- cHistogramContainer added for color use in an image
- Added cGDIIImageEncoders
  - Needed for image conversions and resize operations
- First steps to separate into Windows and Web classes

# History – Version 2.7 (\* Not Released \*)

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- Added cGDIRegion class
- Extended cGDIGraphics class
- Dynamic cGDIIImageEncoders objects
- Added EXIFDateTime function
  - Easier than via ImageProperties

# History – Version 2.7 (\* Not Released \*)

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- New classes
  - cClipboard
  - cBaseGDIIImage
- New struct definitions
  - Bitmap oriented
  - tRectF

# History – Version 2.7 (\* Not Released \*)

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- Enhanced classes
  - cDbImageContainer
    - E.g. read information from a binary column
  - cGDIPen
  - cGDIPlus

# History – Version 2.7 (\* Not Released \*)

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- Enhanced classes
  - cImageContainer
    - EXIFDateTime function
    - CopyToClipboard / PasteFromClipboard
    - LoadBitmapFromHBitmap
  - cGDIGraphics



# History – Version 2.8 (\* Not Released \*)

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- New and moved struct definitions
- Use of integer alias types (e.g. gpStatus)
- Use of testing GDI+ object pointers instead of assuming they contain a value
- Singleton object of cGDIPlus instead of multiple cGDIPlus objects

# History – Version 2.8 (\* Not Released \*)

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- Improved classes
  - cdbImageContainer
  - cGDIGraphics
  - cGDIIImage
    - Remove cBaseGDIIImage – merged into cGDIIImage
  - cImageContainer

# Version 3.0

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What's new / changed

# Version 3.0

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- DataFlex 19.1 code cleanup
- Windows only and general purpose classes/code
  - E.g: Moved the image animation code to `cImageContainer`
- Documentation in code improvement (a lot)
- Header definitions in separate files

# Version 3.0 – Improved Classes

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- cGDIPlus – More error handling, documentation
- cClipboard – CopyText
- cDbImageContainer – Save / Read methods
- cGDIGraphics – New methods (lines, arcs, rectangles, ellipse etc)
- cGDIGraphicsPath – New methods (lines, arcs, path etc)

# Version 3.0 – Improved Classes

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- cGDIIImage
  - GPSLongitude / GPSLatitude support
  - ImageFileFormat extended
- cGDILinearBrush – Full GDI+ support
- cGDIPathGradientBrush – Full GDI+ support

# Version 3.0 – Improved Classes

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- cHexHandler – Error checking / docs
- cHistogramContainer – Error checking / docs
- cImageContainer – Error checking / docs

# Version 3.0 – New Classes

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- cGDIMatrix
- cGDITextureBrush
- cGDIHatchBrush
- cGraphicsContainer – to draw on canvas



# Version 3.0 - Changes

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- Images from file are read via DataFlex instead of GDI+ directly
- cGDIPlus object contains dynamically created objects

# Version 3.0 - Changes

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- New help file that integrates with the DataFlex 19.1 help
  - You can now directly go to the documentation for one of the classes in the code

# Demo

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Demo applications

# Version 3.0 – Demo workspaces

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- DataFlex embedded database
  - Datademo app reads image from disk file
- MSSQL database
  - Datademo app reads image from binary table.column

# Version 3.0 – Demo workspaces

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- No Data
  - ImageGallery
  - ResizeImageDemo
  - EditImage
  - Shapes

# Release

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# Release

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- Download from <https://www.dataaccess.eu>
  - Go to resources, downloads, libraries, graphics
  - Using your DAID account

# Future

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# Future

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- Improve / complete documentation
- Add Web Application to the examples
- More GDI+ classes



**Thank you for listening**

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And being patient for the 3.0 release