



Sentient Suite v2.9 - supported data sources

Supported file and applications-based formats

The following file extensions are supported by the Sentient Suite, for object creation with listed applications:

- Proteomics, metabolomics .GSC, .GSP, .GIM, .CDF
(e.g. 2D-DIGE, LC, MS / IOI Sentient, Bio-Rad, AIA, AMDIS, etc.)
- Genomics .CEL, .CNT, .CHP, .EXP, .PGF, .CLF
(e.g. Partek, Affymetrix, etc.)
- Microscopy, images .ZVI, .BCR, .SPM, .MDT
(e.g. Zeiss, SPIP, nSurf, FISH / image formats below)
- Molecular structure .MSV, .PDB, .MOL, .MDL, .SKC, .VAL, .ACD, .MSV,
.PDB, .MOL, .MDL, .SKC, .SK2, .S3D, .CDX, .CHM,
.CDXML (e.g. WebLab, NCBI Cn3D, ChemDraw/Sketch)
- Excel, delimited data .XLS, .CSV, .TSV
- Text .DOC, .TXT, .PRN, .RTF, .PDF, .PPT, .PPS
(e.g. MS Word, text applications, Adobe PDF, scanned documents)
- Web .HTM, .HTML, .ASP, .PHP
(e.g. form entry, questionnaires, web query and capture)

Specific data formats may be added according to the customer's applications needs. In most cases, any application that opens data in a PC environment can be supported by Sentient for batch import. Additionally, data defined according to standards such as RDF / OWL, N3, C-DISC, HL-7 and others may be supported upon customer request. The following image file formats in all dynamic range (bit-rates) and resolutions are also supported for batch creation, in black & white and color:

- Windows Bitmap Files (.bmp)
- CompuServe Graphics Interchange (.gif)
- Flash Pix (.fpx)
- JPEG Joint Photographic Experts Group-compliant (.jpg, jpeg)
- Microsoft Paint (.msp)
- Photoshop (.psd)
- Kodak Photo-CD (.pcd)
- Portable Network Graphics (.png)
- Tagged Image File Format (.tif, .tiff)
- TrueVision Targa images (.tga)
- Windows Metafile (.wmf)
- Windows Clipboard (.clp)
- ZSoft Paintbrush (.pcx)
- Portable Network Graphics (.png)
- Sun Raster (.ras)
- Silicon Graphics (.sgi)
- Swiss Institute for Bioinformatics' Melanie file format (.mel)
- Amersham imager file formats (.gel, .tiff)
- LZW-format compressed images (TIFF, GIF87, GIF89a, multi-frame GIF)

Supported web-based data sources - public and subscription databases

The Sentient “Expert Query” is mapped to over 170 public web-based data sources:



Figure 1: Screenshot showing a portion of the ~170 web-based data sources mapped within the Expert Query.

The Expert Query prepares queries entered by a user for submission to each of these data sources. Queries or Results may be conveniently annotated onto Sentient data.



Supported 3rd party databases

Most ODBC compatible databases may be integrated for direct query and reporting or for curation and report-based object creation using the Sentient “Form Query”. These are the tested, supported databases (via ODBC, local and/or remote):

- Access
- dBase
- Excel (as ODBC entry database)
- Filemaker Pro
- FoxPro
- MySQL
- Oracle
- SQL Server
- Visual FoxPro

Note: Some versions of these databases may be subject to external ODBC (database access standard) incompatibility bugs. IO Informatics cannot pre-test for all possible database versions and operating system update states. Therefore, unexpected access issues may occur in some installations.

Sentient technology uses interactive software objects (“IMOs”) as database records to transform data from 3rd party databases into meta-databases, with structured information imported to a triples-oriented Index, with standardized reference images formed and associated for useful viewing and interaction, and with links back to original “raw” data.

Supported instrument integration

Data can be captured directly from the following instruments during acquisition:

- TWAIN-compatible devices

Twain-compatible devices are directly supported via standard TWAIN connection. They will be automatically listed in the Sentient Suite as available devices to choose from for data acquisition and IMO creation.

- PC / Non-TWAIN devices

Non-TWAIN devices are supported through communication with their native device driver as long as the driver / application are either installed on the same computer system or are network-accessible within a LAN. This support requires proper driver and access permissions to be set.

Together, these functions and additional methods for data capture, entry and association result in the efficient creation of reference databases suitable for integrated analysis and knowledge building.