



IRI CellShield

PII / PHI Search & Mask in Excel

- Classify and Find PII in Multiple Sheets
- 1-Click Encrypt, Redact or Pseudonymize
- Display or Export Search & Masking Results
- Full Sheet and Formula Protections

Locate and Lockdown Sensitive Data in Excel® Spreadsheets

The screenshot shows the Excel interface with the CellShield ribbon active. The ribbon includes options for Help, About CellShield, Import (EIF, File, Set, File, Search), Intra-Cell, Mask, Encrypt & Redact, Pseudonymize & Restore, Autoprotect, and Logging. An 'Intra-Cell Search' dialog box is open, showing a search for 'Credit Card With Dashes' using the pattern `^((4d{3})|(5[1-5]d{2}))|(6011)|(34d{1})|(37d{1})`. The dialog also has options for 'Whole String' and 'Partial String', and a 'Mask' button. The spreadsheet content includes a list of Korean Social Security Codes, a thank you message with a redacted credit card number (6011499320112332), and a list of Netherlands Social Fiscal Numbers (represented by green X's).

Enterprise Edition Product Summary



Data Protector Suite

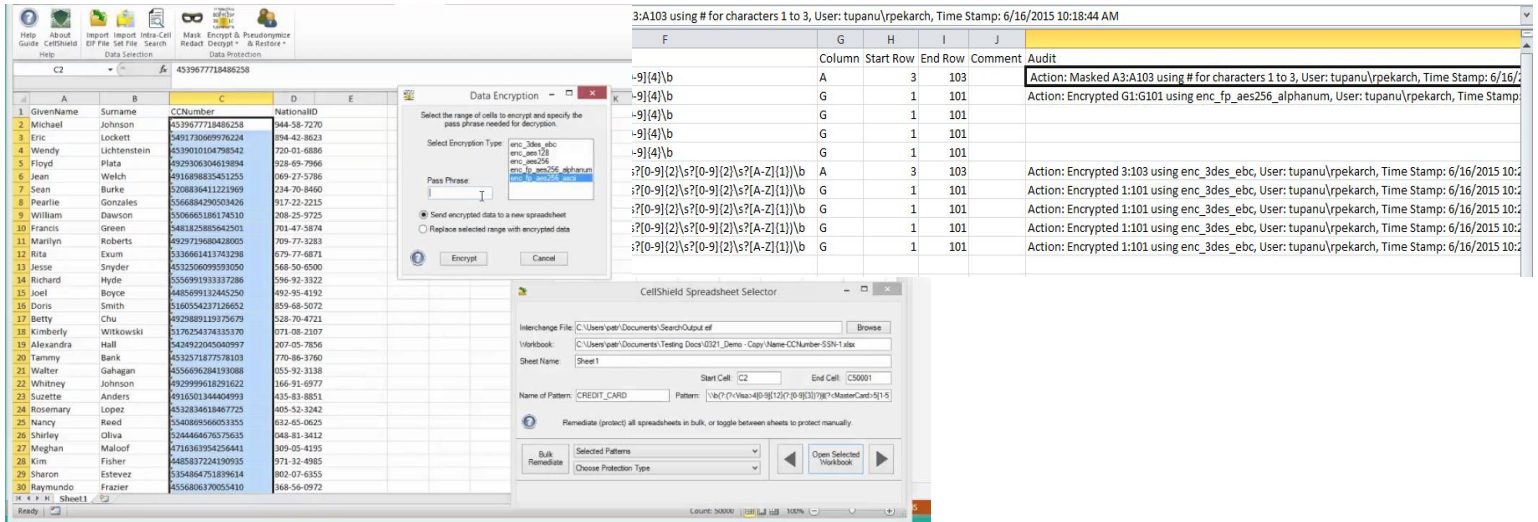
Spreadsheets at Rest = Data at Risk

Excel is a leading data storage, organizational, analytic platform, used on hundreds of millions of desktops. Many spreadsheets hold sensitive corporate or personally identifiable information (PII).

Password protection of sheets has been a haphazard, and less than secure, way to safeguard such information so far. In addition, locking down entire sheets does not allow the use of non-sensitive or masked data within them for data-driven development or demonstration.

The answer therefore lies in a uniquely powerful solution purpose-built to classify, locate, and mask information that is classified as sensitive, and automatically protected regardless of whether it exists in selected column or range, within free-text cells, or randomly throughout multiple sheets in one or more XLS or XLS files.

The challenge is not only to find all that sensitive data, but to uniformly apply the necessary masking functions so that the ciphertext is deterministic for each original plain text value ... because such consistency is necessary for referential integrity between sheets and other sources where that data may come or go.



IRI CellShield Enterprise Edition (EE)

CellShield EE supports the risk and controls framework in enterprise analytics, database and DevOps environments by classifying, finding, extracting, masking, and reporting on PII and other data 'hidden' in one or more Microsoft Excel spreadsheets in one or more Windows drives on a single computer, or shared across a local area, or cloud-mounted, SMB network.

CellShield EE is one of three enterprise-class standalone static data masking products from IRI. These products are also members of the IRI Data Protector suite, and are included at no additional cost in the IRI Voracity data management platform. They are designed and updated to comply with current US and international data privacy laws, reduce or nullify the impact of data breaches, and provide safe, intelligent test data for DevOps et al.

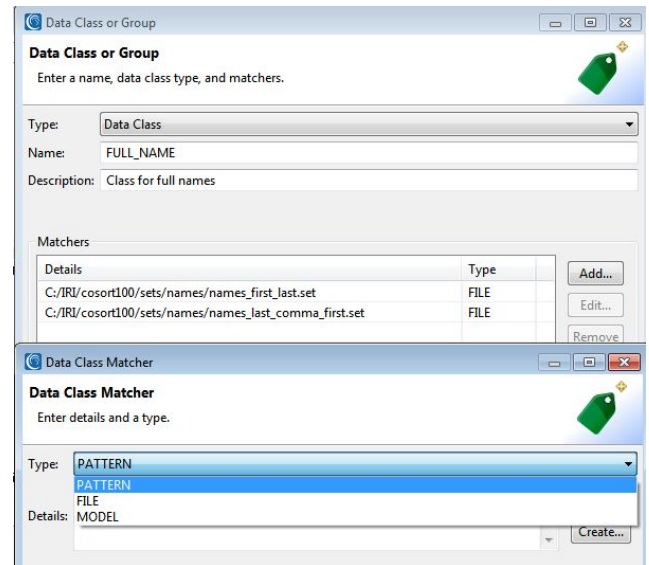
While it is also possible to support Excel data in the course of IRI FieldShield (RDB and flat-file) and IRI CellShield (semi- and unstructured) data discovery and de-identification, CellShield EE was purpose-built for Excel users concerned only with PII in spreadsheets, and who prefer to see and mask data directly in the Excel environment. CellShield EE provides point-and-click functionality to protect columns with reversible and non-reversible masking functions in a single sheet, or simultaneously across multiple sheets in a LAN.

CellShield EE shares the same data classes, search methods, and core masking functions as FieldShield and CellShield. Thus, data masked in one platform can be unmasked in another in a referentially consistent way.

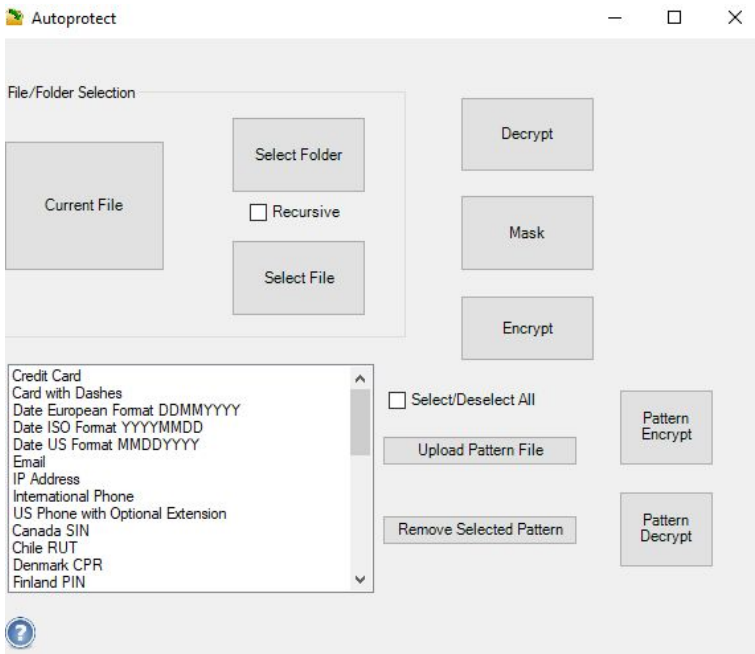
Search Methods

CellShield EE can use the same data classification and searching facilities in IRI Workbench as IRI DarkShield or FieldShield. This allows elements common to many data sources -- like names, email and street addresses, and account / ID numbers -- to be centrally defined, and found using a variety of search methods, including matches to:

- 1) values stored in a lookup table
- 2) named column ranges
- 3) stored or new Java RegEx patterns
- 4) machine-learned named entities in a trained Natural Language Processing (NLP) model



Through this approach, users can scan every XLS/X file at once, finding matches in their sheets and reporting search results in text and Excel format; the latter can be opened in Excel for graphing and masking. CellShield EE users can, alternatively, search for data values that match provided or custom-defined RegEx patterns from within Excel (without Workbench), and produce graphs, take action on, and export both search and masking log results to a file, email, DataDog, or Splunk. A separate intra-cell feature also runs Excel-side to automatically find and mask pattern-matching data floating within unstructured cell contents; e.g., a comments cell with free text.



Masking Functions

At a global data class, full-sheet, pattern-matched, or manually-selected cell range level, CellShield EE users can apply any of the three most popular [static data masking functions](#) also used in both the FieldShield and DarkShield products; i.e.,

- Format-preserving (or not) encryption
- Lookup (restorable) pseudonymization
- Redaction (full or partial, non-reversible)

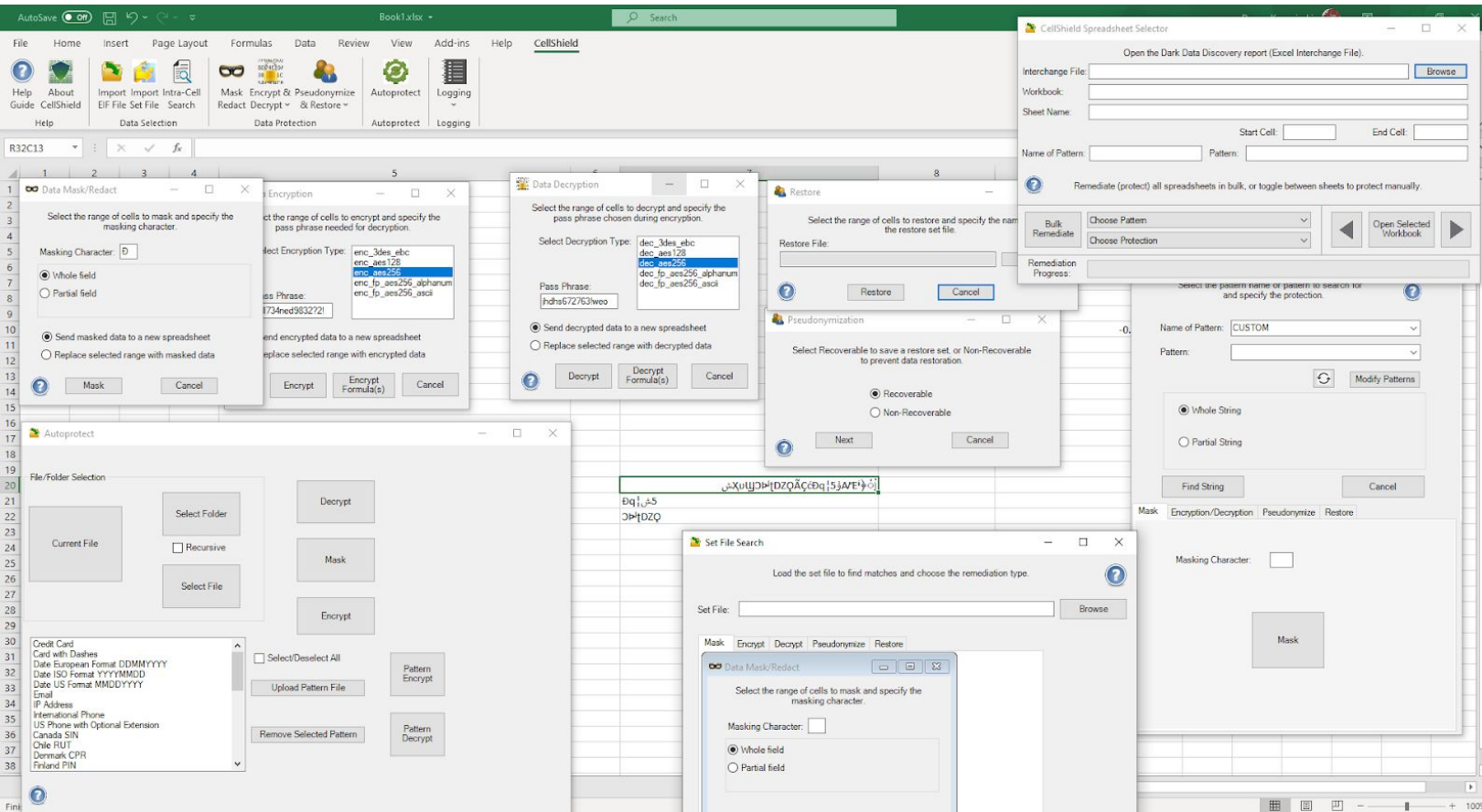
Several encryption routines are provided, and the encrypted data can be decrypted with the corresponding function and specified key. Masked data can overwrite original cell values or be sent to another sheet in the same file, in the same range locations.

Additional Features & Benefits

In addition to ergonomic ad hoc and bulk searching and masking operations for Excel sheets, CellShield EE also:

- helps GDPR data collectors and processors comply with data portability and right-to-be-forgotten provisions through search value extraction and surgical deletion;
- includes the same free Eclipse™ IDEt, IRI Workbench, which front-ends many other data source classification, profiling, search, and masking wizards for IRI FieldShield and IRI DarkShield; and,
- licenses affordably standalone, in a bundle with other IRI Data Protector suite products, or for free inside IRI Voracity total data management platform subscriptions.

Selected Dialogs



Compatible Applications

CellShield EE uses the same IRI Workbench front-end, data classes, and masking functions as:

- IRI FieldShield - for structured DB and flat-file masking
- IRI DarkShield - Semi- & unstructured data masking
- IRI Voracity - for big data integration, test data, etc.

Version 3 Roadmap

CellShield EE is in development, and will support more masking functions, and masking through macros.



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2194 Highway A1A
Melbourne, FL 32937 USA
1.321.777.8889 * 1.800.333.SORT



iri.com/CellShield