LockMagic for Microsoft Excel

Partial WorkBook Encryption

Microsoft Excel is a powerful spreadsheet processing application designed for both business and personal environments. It is one of the most widely used software programs for worksheet processing.

LockMagic secures your content in Microsoft Excel by adding partial workbook encryption functionality. During the process of creating content you have the opportunity to control your information security from a single worksheet to the entire workbook. With a single click your sensitive private, personal and confidential information is encrypted right inside Excel. You no longer need to remember which documents need to be encrypted or use inaccurate and cumbersome post processing to tag and classify documents.

LockMagic is an easy-to-use identity-based encryption system enabling users to encrypt and secure files, documents and folders anywhere, and to share secure content with anyone by simply using their email addresses for authentication. It supports various identity systems including enterprise LDAP authentication services, as well as Internet-based identities such as Hotmail, Google, Yahoo or any other OpenID based systems.

'Partial' & 'Whole' WorkBook Encryption

LockMagic *Whole WorkBook Encryption* feature you can be used with *Partial WorkBook Encryption* simultaneously for double encryption improving security and authorization.
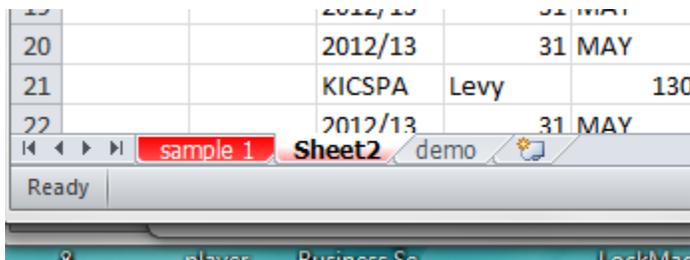
Partial WorkBook encryption   *Whole WorkBook encryption*

LockMagic Authorization Model

LockMagic provides an identity-based access model with a role-based authorization model. Encryption is based on user and group identities and each worksheet is assigned a single set of authorized users and groups along with their roles. Each identity (user or group) is assigned a role of either "Owner", "Editor" or "Viewer". The user role defines the set of actions the user can undertake on the encrypted worksheets.

Each encrypted worksheet is assigned a permission level controlling the different set of actions that a given set of users are allowed to perform. The permission level of an encrypted worksheet maps to the user roles and each level has a set of pre-defined rights. The highest permission level maps to the "Owner" role followed by the "Editor" role and finally the "Viewer" role being the most restrictive. A user role must be equal or exceed a section assigned permission level in order to be able to decrypt its content. Users assigned the "Owner" role have full control over all encrypted sections and can manage encrypted sections identities and roles.

Editor users can access encrypted worksheets assigned "Editor" or "Viewer" permission levels. Editors are prohibited from accessing encrypted worksheets assigned the "Owner" role as well as managing user & group identities and roles. Finally, viewers can only access encrypted worksheet assigned "Viewer" permission level and are prohibited from managing user identities and roles.

The following table outlines the user role permissions for each user action.

| User Action	Owner	Editor	Viewer
View	**Allowed**	**Allowed**	**Allowed**
Edit	**Allowed**	**Allowed**	Prohibited
Delete/Decrypt	**Allowed**	**Allowed**	Prohibited
Print	**Allowed**	**Allowed**	Prohibited
Edit Section Role	**Allowed**	**Allowed**	Prohibited
Manage Users	**Allowed**	Prohibited	Prohibited

When a spreadsheet author tries to encrypt the first section the user is prompted to specify the set of users and groups identities that are authorized to encrypt, decrypt and view the secure content.
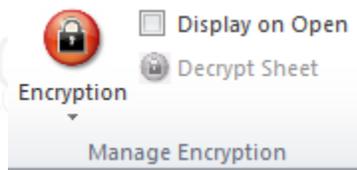
Each user is also assigned one of the three pre-defined roles – "Owner", "Editor", "Viewer". User roles control the set of actions that can be taken by the user on each encrypted section.
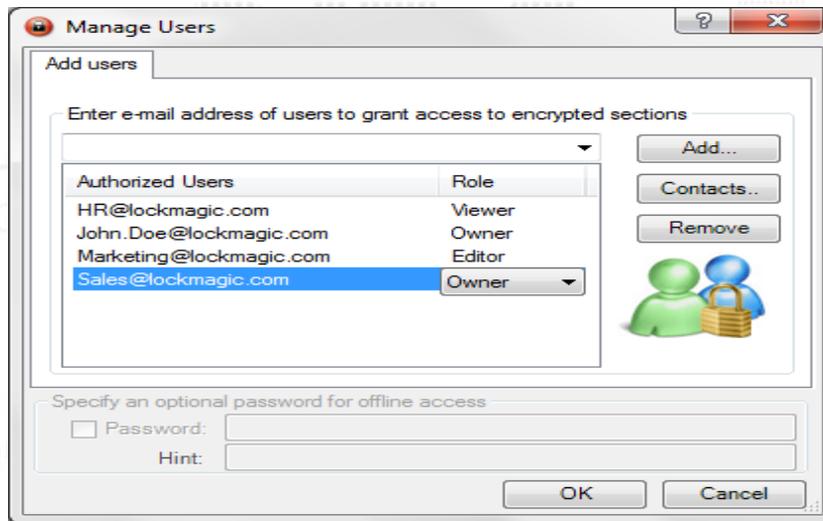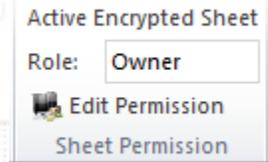

Next, the user is prompted to specify the encrypted section role authorization information. Each section is assigned a single role – "Owner", "Editor" or "Viewer.
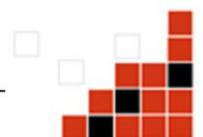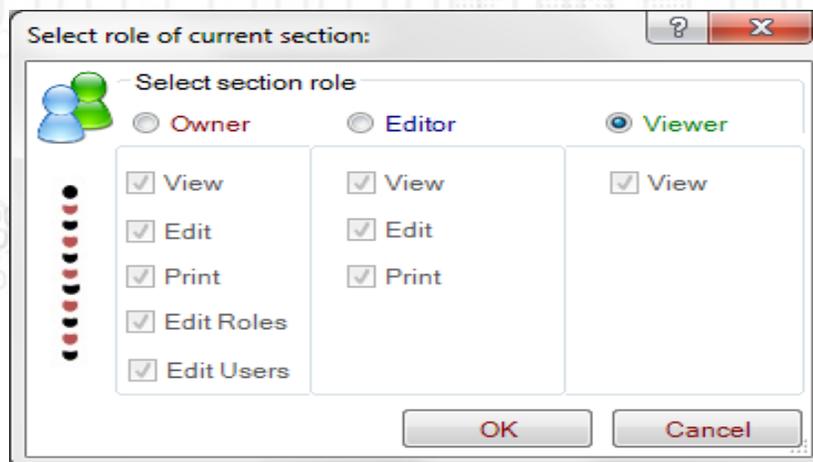
Each encrypted spreadsheet is displayed depending on the user role and each section permissions
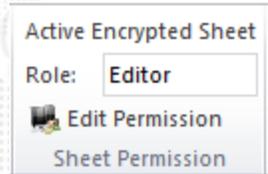
"Owner"

A user or group with *Owner* Role is able to view **all** encrypted spreadsheets in the document.
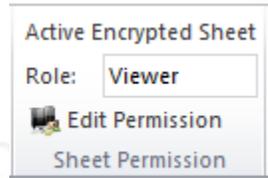
"Editor"

A user or group with *Editor* Role is only allowed to view parts of the spreadsheet with <u>Editor</u> and <u>Viewer</u> permissions. Encrypted content with <u>Owner</u> permissions are inaccessible.

"Viewer"

A user or group with *Viewer* Role can only view encrypted worksheets with viewer permissions level.

But I don't want the people to know that I have hidden encrypted information within my document!

Piece of cake! With LockMagic this is done in one easy step! All encrypted worksheets are automatically hidden from non-authorized users.

My document contains many worksheets! How will I be able to locate my encrypted content?

LockMagic allows you to locate encrypted content in couple of ways. You can view your encrypted content on a list grouped by section permissions. Or you can simply highlight all the encrypted content within your document.
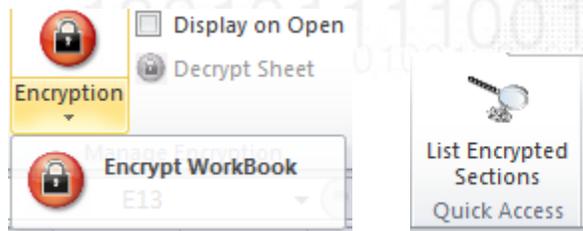
No one will know how much data you have actually hidden from them; it doesn't matter whether you encrypt one worksheet or hundreds! It all can be invisible or looks the same with LockMagic.

Are encrypted worksheets visible when I print out the document?

With LockMagic there are no complications! The way you want your document to be viewed is the way it's going to be printed out. If you want to print the document with all encrypted worksheets visible then simply press 'Show' with 'Apply All' option checked. Then print out the document as any normal document.

However, if you want to hide your encrypted worksheets then simply press 'Hide' with both 'Apply All' option checked. When you print out the document all encrypted worksheets are invisible and as such not printed out.
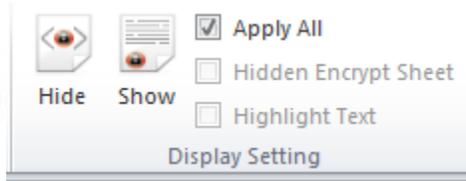
Remember, you also have control over who can and cannot print out your document.

Summary

With LockMagic sharing spreadsheets with other people is easier and more secure because LockMagic gives you control over each part of your spreadsheet. It enables you to define how a single person or group of people interacts with different part of your spreadsheet.