$T(x) \cdot \left(\frac{\partial}{\partial \theta} \ln L(x,\theta)\right) \cdot f(x,\theta) dx = \int_{R_*}^{T(x)} \left(\frac{\partial}{\partial \theta} \ln L(\xi,\theta)\right) f(x,\theta) dx = \int_{R_*}^{T(x)} \int_{R_*}^{T(x)}$  $MT(\xi) = -\frac{\partial}{\partial t} \int T(x) f(x, \theta) dx = \int \frac{\partial}{\partial \theta} T(x) f(x, \theta) dx$ 

 $\frac{(a-a)}{\sigma^2} f_{a,\sigma^2}(\xi_1) = \frac{1}{\sqrt{2}}$ 

## **ROV COMPILER**

- Compile any existing Excel 2002, 2003, 2007 model into an executable EXE file
- Compiled files will function exactly like an Excel file, with all of the Excel functionalities as well as Excel look-and-feel, but the end-user will not have access to the calculations, functions or logic
- All computations are embedded in binary format that is encrypted and not accessible to the end-user
- Safely and securely distribute the model without losing control of any intellectual property or company secrets
- Locked using a 2048 bit RSA encryption (more powerful and secure than military strength protection)
- Create user licenses (number of uses, date and number of days)
- Maintains a strict quality control and prevents malicious tampering or accidental breakage of the model (no more broken links, wrong functions and calculations, and so forth)
- Usable by third-party software applications in a Component Based Modeling environment called in command console mode
- Use Excel as a programming platform instead of just modeling... you do not need to learn advanced software programming to create your own licensed software!



**ROV COMPILER** is meant to be used to convert Microsoft Excel XP, 2003 and 2007 files to extract an existing model into pure mathematical relationships and code such that the same model can be used as usual but the intellectual property of the model is protected. You can now use Excel as a software development tool instead of only a modeling tool. That is, suppose you are an expert in a certain industry like banking, pharmaceutical, biotechnology, manufacturing, insurance, aeronautics, and so forth, and further suppose that you have developed Excel models and worksheets that are appropriate for use by others in the same field. You can now use ROV Compiler to create executable EXE files from your existing Excel models, lock up the mathematical, business and computational logic into binary code and create extremely secure hardware-locked license protection of your file and distribute it like a software program. The compiled file when run will have the exact look and feel of Excel, minus the ability of accessing critical calculation logic, plus the ability to be secured and licensed like a regular software program. There exists public domain software that will crack Excel passwords quickly and effortlessly, but these crack software will not work on compiled files. By running the extracted model, several items are accomplished, namely:

- Use Excel as a programming platform instead of just modeling... you do not need to learn advanced software programming to create your own licensed software!
- Any existing Excel 2002, 2003, 2007 files and beyond can be compiledextracted from Excel XLS or XLSX files and turned into binary mathematical code and the file will become a self-executable EXE file-that when run, will open in Excel. The file will function exactly like an Excel file, with all of the Excel functionalities as well as Excel look-and-feel, but the end-user will not have access to the calculations, functions or logic. It will look and feel like Excel but the computations are all embedded in binary format that is encrypted and not accessible to the end-user.
- All of the business intelligence and relationships are maintained but will no longer be visible to the end-user, allowing the model creator to safely and securely distribute the model without losing control of any intellectual property or company secrets.
- The compiled model can be locked using a 2048 bit RSA encryption (more powerful and secure than military strength protection) and can only be accessible using the correct password and license (using computer hardware locking algorithms).
- The compiled model cannot be changed by the end user and this maintains a strict quality control and prevents malicious tampering or accidental breakage of the model (e.g., equations and functions with broken links, wrong functions and calculations, etc).
- The compiled file can also be used by third-party software applications in a Component Based Modeling environment. For instance, the end user might have his or her own software or database with predefined calculations. The compiled file is linked into and is a part of this existing proprietary system and can be called in command console mode. Your own proprietary software system simply obtains the inputs to link into the compiled file and the compiled model will perform the computations and return the required outputs.

## SYSTEM REQUIREMENTS

This software can be run in any Windows or MAC environment (MAC operating systems require Parallels or Virtual Machine to emulate a Windows environment), and is compatible with Microsoft Excel. The software suite requires 30MB of free disk space with a recommended minimum 1GB of RAM for best performance.

## TRIAL VERSIONS

ROV Compiler can be downloaded immediately from our website with a default 10 day trial license. Our philosophy is you get to try before you buy. Once you use it, we are convinced you will fall in love with the simplicity and the power of the tool, and it will become an indispensible part of your modeling toolbox. However, please note that the trial version can only create 10-day licenses and will come with a trial version message (these will be gone in the fully licensed version).



Please use the ROV Extractor and Evaluator software instead, also developed by Real Options Valuation, Inc., if you wish to extract the model into a file that runs completely outside of Excel (extracted into EXP files) where all of its calculations are hidden and protected. This ROV Extractor and Evaluator software complements the ROV Compiler software such that a large model that can take a long time to run in Excel can now be run at extremely fast speed in the lifted EXP model. Large scale Monte Carlo Risk Simulations with large number of trials can be performed at very high speeds. Large models with many irrelevant parts are identified and additionally, you can identify the main key inputs and outputs you wish to have modeled. For instance, in a model such as A+B+C=D, B+E=F, and if F is chosen as the key output, only B and E are relevant. This decreases the computational time for the model by identifying critical inputs, and the model can then be optimized to run even faster once the model thread is identified. The large Excel model can now be turned into a calculator-like environment, where all the end user has to do is enter in the inputs and obtain the outputs. Imagine it as akin to creating a very large Visual Basic function in Excel, but instead of a simple function with several lines of computations, this function is an entire Excel workbook with many interconnected worksheets.

ROV Compiler							•
le Go Compile View Help New Open Save Gener	al Security File	Verify	Com	pile Licensin	g Help	About	)
Project Settings     Image: Set project information information       Image: Set project information	File Settings Excel File to Convert: c: Save Excel File As: c: Related Files (XLA, VBA, etc File Name Mt \ui-compiler licen You can s into a com determine Input Ranges: Input Range Name A1:C2 B5	VExample Model (Compiled Mode c): asing.jpg elect the E ppiled exec the key in	i.xis il.exe isceli fi iscutabil puts i i i i i i i i i i i i i i i i i i i	files to con e EXE file to con e EXE file to control to	vert and s s: e Name		owse owse add File lid Folde Delete elete All
ady							
ndy ROV Compiler lie Go Compile View Help New Open Save Gene	eral Security File	Verify	Cor	mpile Licens	ing He	Ip Abo	ut
ROV Compiler ie Go Compile View Help Wew Open Save Gen Project Settings: Set project information Security Settings: Licensing and access control	sal Security File Security Setting Alow Changes in EXE Protect All VBA Codes Apply Simple Password	Userify Userify Userify Userify Userify Userify Userify Userify	Сон	D A	ing He	ip Abo	ut
Ady ROV Compiler ie Go Compile View Help ie Go Compile View Help ie Go Compile View Help ie Gopen Save if General Settings: Set project information General Settings: Set project if General Settings: Licensing and access if Security Settings: Licensing and access if Security Settings: Verify current project Compile View Compile Current Compile Project: Compile current	Security File     Security Setting     Alow Changes in EXE I     Protect All VBA Codes     Apply Simple Password:     Apply Advanced Licens     SPABB800D33A 5075     75C29 ISC2C20 280     Code Code Code Code Code Code Code C	Verify Verify gs to be saved and Macros 3 Protection sing (Use the for 54CA 3408B864 300 400966121 407 8010214075 300 400966123	Retyp; slowing 174CEB6 88CODF 88CODF	Pe Password: ene ryption tem 35284784799000 7035500F734C 002EF9000	plate); A14CS7837E1S 7A27A40F18A	258 Gen	ut
ady ROV Compiler ile Go Compile View Help  Compile Open Save Project Settings: Set project General Settings: Set project General Settings: Licensing and access Compile Security Settings: Verify current project Settings Verify Settings: Verify current project Compile Project: Compile current Project Licensing Current Project	Security     File     Security     File     Security Setting     Alow Changes in EXE I     Protect All VBA Codes     Apply Simple Password     Password:     Apply Advanced Licent     SPABB800D33A5075     75C2915C2C2028BC     CA073D7438570-4C     Default Limited Use Capate	Verify Verify SS to be saved and Macros d Protection sing (Use the for 54CA SA08B864 5500-00966 12140F39 alities: Number of Us Number of Da Number of Da Expiration Da need Protection	Retyp Cor Pallowing 74CEB6 B8F208 B8F208 ess: ays: te: h	De Password: en avybion temy 35:2847847990,0 70 358CDF734C 0 A 22F90A0	Diate): 144-0578-375-15 774277-40F 18A	158 278 Gen	erate
ady ROV Compiler iie Go Compile View Help Wew Open Save Gene Project Settings: Set project Compile Settings: Usensing and access Compile Settings: Usensing and access Compile Project Compile current project Licensing Project Licensing Courses Project Licensing current Project Settings: Verify current project Compile Project: Licensing current Project Licensing current	sal Security File Security Setting Alow Changes in EXE Protect All VBA Codes Apply Simple Password Password: Apply Advanced Licent SSAB8800023345075 PSC22028E CA073D7435870-4C Default Limited Use Capat Capato Code Capato Capat	Control hoon naccess y	Retyp ollowing 94CEB6 88F208U wes: hys: te: hys: te: hys: te: hys: te: hys: te: hys: te: hys: te: hys: hys: hys: hys: hys: hys: hys: hys	Pe Password: encryption tem 9:229-747990 9:229-747990 0:2010-01-08 Generate Lik Generate Lik g and how ompiled EX	plate): 114C87837E19 TA27A-BF18A	ip Abo	erate