Gap Analysis

SCOPE vs FPW

Why SCOPE?

SCOPE Project Sizing Software™ is recognised by the software metrics industry as the most advanced function point counting tool available on the market today. It was designed by industry expert Pam Morris (CFPS), who specified and project managed the original development of Charismatek's Function Point Workbench™ software (FPW) from 1991 to 1994.

SCOPE was built specifically to address all the limitations that the Total Metrics team of function point specialists had experienced when using FPW; particularly with respect to ongoing management of counts in a corporate environment and tracking software changes in outsourcing Contracts.

SCOPE has extended all the great functions and features, originally designed into FPW, to take them to a new level of sophistication. In bringing function point counting up to date with the latest software technology and methods of development, it has also added many new features to take your function point counting into the future.
Function point counting is now:

- ❖ Easier
- ❖ More reliable
- ❖ More accurate
- ❖ More cost effective
- ❖ More accessible
- ❖ Less exposed to risk of losing data
- ❖ Less exposed to risk of data corruption

SCOPE imports all the detailed count data from _all_ current versions of FPW so that you can upgrade to using SCOPE in minutes and continue counting without any loss of historical data.

SCOPE has been implemented in major corporations in over 15 countries, to become today's function point counting tool of choice for people who are serious about counting.

Join all the other previous FPW users and upgrade to SCOPE today.
Ask us about our _discounts_ for previous FPW Licensed users.
Total Metrics will be pleased to assist you in building your business case to upgrade to SCOPE.

Gap Analysis Summary

Feature	SCOPE	Benefits of SCOPE
Interface designed for **Windows 7®** by Microsoft Partner to work like MS Explorer®	☑	**Modern familiar interface means minimal training required** to learn all SCOPE features
Selectable **multilingual interface** (includes all screens, messages and reports)	☑	**SCOPE is available in 10 Languages:** English - Japanese - German - Chinese - Korean- Portuguese - Dutch - Spanish - Italian - French
ISBSG compliant **Metrics Repository** allowing user to record all Effort, Defect, Environment Attributes for trends analysis and benchmarking	☑	**SCOPE integrates all Project and Maintenance and support metrics** into a central repository for centralised reporting.
Provides **Automatic Comparison** allowing user to quickly compare reports from different counts	☑	**SCOPE** supports your Metrics Manager to verify what has been changed between two different versions of a count. The Compare function highlights which nodes (process, data, notes or attributes) were changed, removed or added new; when and by which User.
SCOPE extracts ISBSG compliant Metrics data and **email ISBSG with your submitted Project Data** or export to MS EXCEL customisable pivot charts for graphical reporting.	☑	**SCOPE** can export an XML file of selected Metrics data and email it to ISBSG as a submission for their ISBSG Development and Enhancement Repository or the ISBSG Maintenance and Support Repository.
Customisable 'numeric multipliers' - allows users to use templates or create their own numeric multipliers to report metrics based on size.	☑	**SCOPE** provides inbuilt Numerical Categories (NESMA Impact factors, Earned Value Reporting, Project Delivery Rates) or you can create and customise your own for quantitative reporting.
Synchronisation capability - allows users to count off-site and later merge the changes they have made into the baseline count without overwriting changes made in the meantime, by other counters.	☑	**SCOPE allows counts to be done remotely** without the worry of overwriting changes made by others when the count results are merged back into the same or an updated baseline.
Single SCOPE database file to simplify data storage and transmission of counts	☑	**Makes transferring** data from different storage media simple and easy
Enables Project Managers to quantitatively track and **interactively display the size of project rework** displaying the history of changes online. Tracks when a process or data group is changed multiple	☑	**Enables suppliers to easily charge back** for project scope-creep and changes to User requirements

Feature	SCOPE	Benefits of SCOPE
times for the same project or removed from the project scope.		
Imports **historical count data** from other industry FP counting software e.g. FPW	☑	**Easy to upgrade** from other tools without losing historical count data
Allows Projects to be mapped to multiple applications so that counts are **automatically aggregated** at project level as well as at Application Release level to display online interactively	☑	Maps the structure of your counts to the real-world structure of your applications development and maintenance environment **for easy reporting and communication**
Allows **multiple separate counts** to be applied concurrently to the same baseline that can add, change and delete processes and data groups without overwriting other counts changes.	☑	Allows multiple counts to be done for multiple change requests that impact the same Release of an application – **avoids separate counts corrupting the master baseline** with counts overwriting each other
Inbuilt **expert assistance in IFPUG counting rules** enhances ability to record and report accurate and detailed count information	☑	**Reduces risk** of giving incorrect sizing for decision making by ensuring more accurate and consistent counting.
All data entry and linking can be done **on a single split screen** without trekking through layers of stacked windows	☑	**Saves significant time** (therefore dollar costs) for a counter to record count results. Also assists in reviewing counts as all information is available on a single split screen and names are fully readable
Field lengths are virtually unrestricted to allow actual specification names to be used in documenting the count and display without truncation	☑	
Data groups can be hierarchically structured to individually document names of RETs and DETs which can be linked to Elementary Processes	☑	
Allows easy hierarchical cataloguing of Notes and Attributes with **long field length or no field length restriction for complete count documentation**	☑	**Saves significant time** (therefore dollar costs) for an auditor to review a count and for another counter to maintain a count since count decisions are easy to record, view and maintain
Online expert system to provide expert assistance in IFPUG counting rules	☑	**Saves time and costs of audits** and recounts by providing an online mentor on counting queries

Feature	SCOPE	Benefits of SCOPE
Full Audit capability of all changes to counts	☑	**Tracks Author and date when all count details were modified** including comments. Fully searchable so you know what changed and when and who made the change. Audit details can be compared using the Automatic Compare function in SCOPE.

1 SCOPE maintains the Integrity of the Count Repository

SCOPE's unique configuration control capability enables it to manage the individual functional sizing of *concurrent* Change Request Projects (Enhancement Counts) ensuring other counts are not overwritten when updating the master Application counts (Production Releases). This feature enables a project manager to 'size' multiple change requests on the work in progress release and track the impact of each individual CR's count on the overall release baseline. The aggregated collection of counts can then be automatically combined to update the Production Baseline Release. This reflects 'real life' where many different business initiatives make changes to an Application within the same time frame.

SCOPE *also* allows flexibility with *how* and *when* you apply your counts to the baseline, for example:

❖ **'Cancelled Projects'** - If a change request is already counted on the baseline but the project was not approved then the cancelled count session can be deleted in a key stroke. All impacts from the count session are removed and the integrity of the release is retained. All other counts recorded on the same baseline will not be affected, even if they made changes to the same elementary processes or data groups.

❖ **'Postponed Projects'** - If a change request needs to be counted but will not be implemented in the current Release, then it can be counted on the current Release baseline and selectively 'held over' and not incorporated into to the Production baseline when it is updated. However, it is automatically retained in the baseline count used for counting and kept up to date until a decision is made to re-instate it or get rid of it. This saves having to recount at a later date and the count in the meantime has been maintained such that it will reflect the 'latest' complexity status and the links between processes or data groups in its scope.

❖ **'Conversion Projects'** If a change request is not to be recorded in the Production count. This would occur for changes to the functionality required to be recorded at Project level but not to be implemented into the production version of an application (e.g. conversion functionality). The size of the CR can be retained in the Release project count and automatically 'not applied' to the

Production baseline count. This saves having to selectively 'trim' your count prior to update.

Automatic Synchronization of the Baseline - The 'impacts' from a Change Request can also be imported and exported from a baseline. The need for this would occur when someone had updated the baseline on a copy of the database, but in the meantime the original baseline had been revised. The counter can then synchronise their 'count' with the latest revised version of the Baseline by selecting to 'import' a count. SCOPE applies its intelligence to apply the impacts of the count on the revised baseline. That is, if a process in the count is *deleted* it will find the process on the revised baseline count and mark it as deleted. If the process has been *changed* then it will be updated and marked as 'changed'. If a new process is *added* then SCOPE will find the correct parent in the revised baseline count and insert the process under its correct parent.

If you have multiple counters counting on the same baseline at the same time, they can do their counts on their own version of the database, then export them and import them into a master SCOPE database and SCOPE will manage them so the integrity of the master version is maintained.

Benefits of SCOPE for Managing the <u>Integrity of the Database</u>:

SCOPE **saves significant costs and time** incurred by FPW users having to manually:

- ❖ **'Fix'** the baseline after counts have been updated in the 'wrong' sequence
- ❖ **'Restore'** the baseline when an 'incorrect' count has been applied on the same baseline as other correct counts and needs to be manually removed
- ❖ **'Merge'** multiple counts performed by multiple counters assigned to count the same project or baseline to respond to an urgent business need. Urgent counts can be completed to respond to the business in a more timely manner
- ❖ **'Re-applying'** counts to retrospectively adjust for changed project implementations and cancellations

SCOPE flexible database management enables **counters to be located onshore/offshore home or in the office** where they can count 'off line' or remotely and then synchronise counts by merging the results back into the 'current' master current version of the baseline.

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2   SCOPE maintains ISBSG compliant Metrics Repository for online Benchmarking and Trends Reporting

SCOPE's developers have worked with the International Software Benchmarking Standards Group (ISBSG) to develop an XML file format the ISBSG can accept for submission of projects into their database. SCOPE enables you to record all Project Effort, Defect and Environment attributes required by ISBSG for Industry benchmarking.

❖ Create your **own Benchmarking Data sets** of project or maintenance and support data grouped how you want them to be reported

❖ Select the Projects and Applications you want to **send to ISBSG**. SCOPE removes any identifying information and allows you to view the extracted data prior to sending via email

3   SCOPE maintains the *Security* and *Confidentiality* of the Data

SCOPE's unique capability to synchronise and extract counts allows the Metrics Manager to select to 'Snapshot' the Release Model to a separate database enabling counts to be:

❖ **Validated** *before* they are merged into the current baseline so as to avoid corrupting the master data repository

❖ **Private** – counts are only provided to other counters on a 'needs to know' basis. I.e. it allows the repository manager to keep the project size data of other business areas private and only accessible to the Repository Manager in the master database

❖ **Secure** - Commercially sensitive projects can be counted 'offline' and only if and when they are approved for public knowledge, then they can be merged back into the current baseline

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Benefits of SCOPE for Managing the <u>Security and Confidentiality</u> of Data

SCOPE **saves significant costs** incurred by FPW users:
❖ Manually applying counts that have been completed on a different baseline
❖ Fixing counts that have been applied without validation

SCOPE **can assist in retaining confidentiality** of 'sensitive' planned projects

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4   SCOPE *reduces risk of database corruption*

SCOPE databases are easily identified and saved as a single *.FPA file that is *Microsoft ACCESS®* compatible. The Enterprise Edition of SCOPE brings the full power and stability of the Microsoft SQL Server database.

SCOPE users can use *Microsoft ACCESS®* to customise and create their own SCOPE reports.

> **Benefits of SCOPE using a <u>single 'file' database</u>**
>
> SCOPE significantly reduces the chances of a **counter failing to copy across all files** and thus making their database unusable

5   SCOPE provides the evidence for *Project Managers to charge for Rework*

SCOPE enables multiple counts to be performed on the same functional model throughout the development lifecycle. Projects often impact the same functions multiple times in project lifecycle. I.e. new functions or data groups may be added by the project then changed several times or even deleted at the users' request. SCOPE has the unique capability to track this *rework*. It is able to report cumulative size of the rework in addition to the net functionality delivered (the net result of the delivered software).

> **Benefits of SCOPE for <u>Measuring Rework</u>**
>
> ❖ SCOPE enables project managers to have their project **quantitatively accredited for the full extent of the project changes** and provide objective evidence for seeking additional payment or special consideration for the resulting lower project productivity rate
> ❖ SCOPE records, measures and reports the full size of the functional impact of a project providing evidence for the outsourcing supplier to justify charging the client for multiple impacts on the same function on the same Release
> ❖ SCOPE's measure of rework assists developers to objectively demonstrate the impact of significant churn or rework and the resulting low productivity rates. This is particularly important when managing client expectations in outsourcing contracts

SCOPE also records the counters name, date and time of the creation and modification of all the count processes and data groups and allows changes to be searched on name, or date of change.

6   SCOPE *makes it easy to upgrade* from other tools

SCOPE can be downloaded from the Total Metrics WWW site and installed in minutes. You can import your historical count data into the SCOPE structure from:

- ❖ EXCEL spreadsheets
- ❖ Function Point WORKBENCH™ (all count details [transactions, data groups, links, notes and labels] as well as project and application details) - Imports ALL versions of FPW

Benefits of SCOPE for <u>easy implementation</u>

SCOPE allows you to quickly upgrade from your existing count environment to counting in SCOPE **without risk of losing your historical count data**

7   SCOPE can be *used by Novices*

SCOPE has a modern Windows 8 standard interface which optimises the use of Windows 'shortcuts' and function keys. All the key components of a count (Processes, Data, Notes and Attributes) have been modelled to behave identically so that once the User learns to maintain, link and report one component (which is similar to the way Microsoft Explorer® works), they can effectively use all SCOPE functionality.

SCOPE Viewer™ has proven that Users who have no function point knowledge or FP tool experience can effectively review counts and run reports in SCOPE

Benefits of SCOPE for <u>ease of learning</u>

- ❖ SCOPE can be used effectively with **minimal or no training** by anyone, thus making count results immediately accessible to new FPA staff and business users who review counts
- ❖ SCOPE significantly **reduces training time and costs**
- ❖ SCOPE makes it easier for new users to migrate from counting on spreadsheets

8 SCOPE *is more cost effective* when recording counts

SCOPE was *designed* by function point counters *for* function point counters, to make counting fast, effective, auditable and well documented. The key component to this objective was to have all features in SCOPE performed on the single main screen avoiding the time wasting tasks of navigating through overlapping multiple windows.

SCOPE displays all four count components (Processes, Data, Notes and Attributes) as Hierarchy trees such that the majority of any tree's nodes are visible AND readable on a single screen, thus avoiding time wasted in scrolling vertically and horizontally to understand a functional breakdown.

The split screen display allows linking of *all* count components to be completed with a single mouse click without changing windows.

Data, Notes and Attributes can *all* be hierarchically modelled and catalogued into folders to facilitate locating them and understanding their relationships when linking to a Logical Data Group or Note to a Process. All branches within any tree can be automatically sorted in a sequence of the user's choice.

SCOPE has an MS Windows standard 'search and replace' function enabling quick up and down searches to find any text in the name or description of any count component (Process, Data, Note or Attribute)

SCOPE allows the counter freedom to use meaningful names and descriptions that best describes any of the count components and always displays the full name without truncation.

SCOPE provides further flexibility for ease of searching and linking by allowing the user to flip the dominant components from the left hand or right hand tree. I.e. unlike FPW it is not driven from a fixed single directional left to right 'transaction tree' view. You can put the focus of the main window on any one of the Process, Data, Notes or Attribute Trees and then drive the count and the links from that view for ease of linking, filtering and reporting.

Benefits of SCOPE for <u>Ease of Recording Counts</u>

SCOPE saves staffing time and associated 'costs' for counting and count reviews by allowing users to:

- ❖ do all counting without constantly switching screens and losing continuity
- ❖ use meaningful names making counting and reviewing faster and **count maintenance easier**
- ❖ structurally model and customise the sequence of all count components including Notes and Data for **ease of review and ongoing maintenance**
- ❖ **perform quick easy linking and highlighting** links when profiling the count to answer business questions

9   SCOPE *is more cost effective* when Maintaining and Auditing Counts

SCOPE was designed with the concept of making it quick and easy to maintain counts of each new change request and making it easy to document and report count decisions to assist in auditing.

SCOPE does this by providing the capability to:

- ❖ **Provide an audit trail** of who changed which tree node when that if fully searchable
- ❖ **Quickly record project changes** (new functions, changed functions and deleted functions) with a single mouse click on pre-existing counts
- ❖ **Detailed Count Reports** that list exactly how a process was counted, not just its type and complexity (i.e. Ranges selected, numbers entered by the user or just defaulted)
- ❖ **Detailed Documentation in Reports** that list for each process which Data Groups, RETs and DETs it accesses and the type of access. (SCOPE will actually automatically derive process and data group complexity from these links to significantly reduce counting time and increase accuracy)
- ❖ **Hierarchal modelling** of Data, Notes and Attributes in addition to Functions and Elementary processes

  - ▪ **Data** - SCOPE enables you to group your related data into Folders, then within a folder sort them in any order you choose and decompose them and name them at Data Group (ICF/EIF), RET and DET level and to link Processes, Notes or Attributes at any level. SCOPE models the Data hierarchically into its RETs and DETs. Processes can be optionally linked to DETs, RETs and Logical Data Groups for greater accuracy of recording and easy auditing

  - ▪ **Notes** – SCOPE allows any comments or Notes to be grouped into SETS which can in turn be decomposed in a similar way to a Table of Contents. Notes can be of any length and arranged and re-arranged and sorted in any order. For importing your specification

just copy the list and import directly from an EXCEL spreadsheet

▪ **Attributes** – SCOPE also models Attributes (key words / labels) into Categories as hierarchical trees. Attributes are not mutually exclusive i.e. Processes can be assigned more than one Attribute within a Category. Data can also be linked to Attributes.

❖ **One step (one mouse click) linking** of any Process, Data Group, Note or Attribute (label) without swapping windows.

Benefits of SCOPE for <u>facilitating maintenance and auditing:</u>

❖ SCOPE significantly enhances **a counters capability to document** their counts so that every change is traceable; every count decision is auditable and easily able to be justified. This **takes the contention out of supplier / client counting disputes.**
❖ SCOPE's ability to cross-reference all processes to DETs as well as FTRs and report count details makes counts **more accurate, auditable and traceable**
❖ The ease of reporting count details in SCOPE makes auditing **faster, cheaper and more accurate**

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10 SCOPE facilitates more *Accurate* and *Consistent Counting*

SCOPE has an inbuilt expert system (FP Decision Maker™), designed by authors and reviewers of the IFPUG Counting Practices Manual, that steps counters through the IFPUG CPM decision logic when trying to determine the type or complexity of a function. This ensures that counters are reminded of the IFPUG guidelines and make count decisions via a consistent and auditable process.

SCOPE has a fully indexed ROBOHELP Help system for all functionality. This help accesses the Total Metrics www site to give the user the very latest HELP for all functionality and embedded Flash Tutorials on most counting activities. Both HELP and the Tutorials are updated every SCOPE Release and because it is online is updated

dynamically whenever we identify another area where it can provide assistance.

SCOPE allows individual users to customise SCOPE to operate with their own user counting and display options and defaults. This flexibility in customisation includes being able to dynamically switch between 10 languages (e.g. French, Italian, German, Japanese, Portuguese, Dutch, Chinese etc) which dynamically changes the language in which the screens and messages will display.

Benefits of SCOPE for <u>Expert Assistance</u>

❖ SCOPE saves 'costs' of recounting and reduced auditing time by providing an expert system 'mentor' to novice counters.
❖ Online 'Flash' Tutorials for all count activities

11 SCOPE counts *are more understandable* by the Business Users

SCOPE 's way of recording functional size takes into account the way we develop software today i.e. It recognises the way it structures its Applications, Release, Projects and Counts such that :

❖ A users business initiative (Project) may have many change requests that impact one or many different software applications and sometimes have more than one CR that impacts a single Release of one of the applications

❖ Software tends to be developed on a Release based approach rather than an approach where each Change Request resulting in a new production version of the software

❖ Each Release may have one or more Change Requests belonging to either same or different projects. These Change Requests need to be individually sized since they contribute to different projects and are often run by different teams and approved independently

SCOPE enables a Project to record multiple Impacts across multiple Applications and aggregate Function Point size, at Change Request, Application Level, Release Level and at Project Level.

SCOPE can record multiple Impacts from multiple projects on an Application concurrently and be able to maintain and report the different Project Impacts independently.

SCOPE's flexibility allows it to respond to changing project implementation decisions by being able to record the Project Impact on an Application AND be able to decide to not apply it, or to remove it or to hold it over to be applied again at a later date when the project is approved or restarted.

Benefits of SCOPE for <u>Modelling the 'real world' of IT</u>

❖ SCOPE counts can be dynamically adjusted to reflect what is happening in the development team and the business so project size can be reported as an aggregate of the CRs for input into estimates and project counts can be cancelled or postponed without corrupting the integrity of the baseline

❖ SCOPE structure can provide the **corporate model** to graphically display the growth of the organisations software portfolio

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12 SCOPE makes *Count results freely accessible*

SCOPE has advanced cross-referencing and reporting functionality to enable you to easily do online 'what-if' analysis and produce up to 40 different reports instantly.

SCOPE central repository of counts is able to be accessed concurrently by multiple SCOPE users. Previewed reports, if accepted, can be printed or saved to a file or emailed.

SCOPE allows you to select to export the report to MSWORD or MSEXCEL or HTML, print or preview.

SCOPE reports, Baseline Size, Reworked Size and Current Count Size dynamically at the bottom of the screen as you move through the functional model.

Full Detailed Management Reports are generated online within seconds in print preview mode. The Count Detail Reports actually report the level of detail that a process or data group was counted. E.g. displays the ranges, or actual number of RETs or DETS. This is useful for auditing count results.

SCOPE allows you to extract your count using the SnapShot option to send the full count details to a client. The client can then download SCOPE Viewer ™ free from the Total Metrics WWW site and install it so they can investigate all aspects of the count, print all reports or provide comments and send it back in softcopy to the counter.

Benefits of SCOPE for facilitating reporting results

❖ SCOPE significantly enhances **a counters capability easily review results** and save time, effort and costs of printing to find an error.
❖ SCOPE count results can be widely distributed to business users and reviewers and they can see all their count details **without having the extra cost** of purchasing a SCOPE licence

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Download your evaluation copy of SCOPE today and start counting
www.totalmetrics.com