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SCOPE

Concurrent Access

SCOPE – Concurrent Access

1 Requirement for Centralised Management of FP Counts

Many organisations express a need to retain a central database of function point counts for the following purposes:

- **Security** – Single location where all function point counts are stored and access can be controlled
- **Data Integrity** – Configuration control, enabling organisation level archiving and backup
- **Management Reporting –** Report all application and project function point counts

2 Centralised Database Options

Whilst the obvious solution for many organisations is a *centralised single* database, accessed and updated real-time concurrently by remote counters, our experience has shown that this real-time update solution has a number of significant risks.

SCOPE has been specifically developed to address the ***needs*** of an organisation for a central repository of counts and ***addresses the risks*** identified with this strategy. **SCOPE**'s unique features enable an organisation to retain control of their central repository and ensure its capability of providing up to date accurate data for management.

SCOPE's strategy recommends that the organisation appoint a single database administrator to administer the central repository of counts, thus ensuring only valid approved counts are applied to the baseline. **SCOPE** has the following unique characteristics that enable the management of the central repository:

- 'Snapshot' capability to selectively export a Release with one or all of its current count sessions
- Import a count into a Release Baseline that has been modified since it was exported and merge in the changes without overwriting other Counts for that baseline
- Allows concurrent counts on the same Release Baseline so that any count can be added, updated and removed independently of other counts
- Allows counts to be held-over to a subsequent release in situations where projects are postponed or late. In the case of a project being cancelled after its count is applied then the count can be removed from the Release Baseline in its entirety without impacting any other counts for that Release Baseline

The following table describes how these unique features of **SCOPE** address the risks usually associated with Central Repositories.

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Risks	Traditional Centralised Database Option	SCOPE Advanced Centralised Database Option
Data Loss	When count repositories are updated real-time, changes are immediately applied, risking data loss or corruption when whole Applications or Counts are accidentally deleted or changed. Waiting for the central administrator to restore to the previous backup may mean loss of all data entered since that backup and counts need to be reapplied.	**SCOPE** enables counters to select to '**save**' or discard accidental changes, reducing the risk of accidental updates to corporate count data. Our approach of segregating the counts to be merged back into the repository later means that any data loss risks are isolated to the current count, rather than the whole repository.
Access Restrictions	Counters located remotely have to rely on network access and 24/7 availability. Difficulties arise where the count location has limited network access e.g. at a client site or when working from off site or from home.	A '**snapshot**' of the latest baseline count can be copied when the network is available, enabling the counter to work offline on the count to be merged back into the central repository at a later date using the count import '**merge**' feature.
Data Unavailability	Databases need housekeeping and need maintenance and upgrades. If this occurs for the single database storing all counts, then these will be unavailable for access by all the counters in the organisation during the maintenance period	Counters can work offline on their copied database of counts and then export them to be validated and approved by the central repository manager before being merged back into the current Baseline count.

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Speed Restrictions	Counters are frustrated by poor response times and reduced counting efficiency when updating large databases storing hundreds of applications with thousands of counts.	Since the counters work on their '**snapshot**' copied count, they do not experience the response time issues dealing with large repositories.
Data Security	Single repositories typically do not provide security restrictions for database access thus making it difficult to monitor who can view, report or copy any count. This has high commercial risk of exposure when counts describe functionality planned for confidential business initiatives.	Only the Repository manager has access to all the counts in the Central Repository. The Repository Manager selectively '**snapshot's**' copies of the applications counts and makes them available to the authorised counters as required.
Data Configuration Control	Unless the FP counting tool has sophisticated mechanisms to track and compare and merge count data from more than one counter, multiple counters counting change requests on the same baseline concurrently, can overwrite each others changes or are locked out of working on the same application at the same time.	**SCOPE** is the only function point counting tool to have the unique **'merge**' capability which allows **concurrent counters** to work on the same baseline at the same time and not overwrite each others changes. When a count is merged back into the subsequently updated baseline it is recorded as its own unique count and incorporates any changes subsequently made to the original baseline, without overwriting them.

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Data Currency	Faced with network access restrictions or the need to keep a count confidential, counters will often copy a count to another database and make changes on the copy. Once the count is complete the counter usually wants to export it back into the central repository, however the imported changes will overwrite any changes made to the Master since the copy was made.	Counts can be **merged** back into a Release at any time or removed from the Release at any time, or **held over** from being applied in the update and automatically re-applied to a later release. This ensures that if a project is cancelled or put on hold that the Baseline counts can be easily adjusted.

For more information about SCOPE and Total Metrics see:
http://www.totalmetrics.com/function-point-software/scope-project-sizing-software

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