Title

Migration of TUFMAN to SQL Server in Pacific island member countries.

Background and needs

The Oceanic Fisheries Programme (OFP) of the Secretariat of the Pacific Community (SPC) began developing TUFMAN in 2003 in anticipation of assisting Pacific-Island member countries with their data-related obligations to the Western and Central Pacific Fisheries Commission (WCPFC), but also in recognition of satisfying their national requirements with respect to the collection, management and dissemination of tuna fishery data.

The philosophy of TUFMAN ensures that Pacific-Island member countries will have better data through specific modules and reports that facilitate the data quality control and identification of gaps in the provision of tuna fishery data. TUFMAN facilitates the management, integration and organisation of tuna fisheries data, making it easier to cross-check one type of data with another. TUFMAN provides ready-to-use and appropriate reports for users of the data, and time is not wasted in the task of formatting detailed data. TUFMAN not only facilitates the data reporting obligations to the WCPFC, but ensures that fisheries departments and other third-party users of the data will be able to make more informed decisions since they will have access to quality data. As at July 2009, the TUFMAN system was installed in twelve Pacific Island member countries of the WCPFC as well as the Philippines and a fisheries agent for Vanuatu, making fourteen installations in all. TUFMAN is currently under re-development with improved stability, an improved user interface and extra components.

Several countries have been using TUFMAN for a number of years and the volume of data continues to increase. In addition, the Pacific Island countries would like to have access to their historical tuna fishery data in electronic form which will substantially increase the amount of data managed by the TUFMAN system. As the volume of data increases, the limitations of Microsoft Access (the Relational Databases Management System [RDBMS] that TUFMAN has been developed with) will not be a suitable platform to support the large amount of data to be managed by TUFMAN. The application can become quite slow over a network, and there are also stability and security issues with Access databases. For these reasons the OFP has decided to move TUFMAN to Microsoft's SQL Server relational database management system, and in particular SQL Server Express for the PICs since this is a freely-downloadable and distributable version of SQL Server . The newest component of TUFMAN, TUBS, will be ready for release to member countries next year. This module has been developed with a SQL Server database and has tables common with the TUFMAN database, so it would be highly advantageous to move TUFMAN to SQL Server before or at the same time as the release of TUBS. The installation of SQL SERVER is not straightforward and must be done *in situ* by technical staff. It will also be necessary to establish new procedures and train member-country counterparts to ensure ongoing support of the TUFMAN system in the future.

SPC-OFP is therefore seeking source funding to allow a visit to each Pacific Island member country to undertake the once-off installation of SQL Server, migrate new TUFMAN to the server and install their historical tuna fishery data into their TUFMAN system.

Objectives

The objective of this initiative will be to visit each member country currently using TUFMAN, install SQL Server, migrate the existing TUFMAN tables to SQL Server and install a new version of TUFMAN that has been optimised for SQL Server. The visit will also serve to install the country's historical tuna fishery data into their TUFMAN system. This will provide to each country a TUFMAN that is faster, more stable, and has better data security.

Work proposed

Before the visits:
1. Migrate a test version of TUFMAN to SQL Server

2. Finalise development of new version of TUFMAN and optimise for SQL Server
3. Perform thorough testing of the new version with an SQL Server Express backend
4. Perform testing of support procedures for the new system, such as remote server access, database updates, importing / exporting of data etc.

Project funded work:
1. Visit each country with TUFMAN installed to:
- Install the SQL Server software
- Migrate the countries data from Microsoft Access to SQL Server
- Install the new version of TUFMAN
- Install the country's historical tuna fisheries data into their version of TUFMAN
- Setup support facilities, e.g. remote access to the SQL Server, Network settings, backups.
- Train member country staff in the new system and the TUFMAN administrator in the SQL Server setup.

Expected outcomes
1. SQL Server and the new TUFMAN installed in all member countries.
2. Remote access possible to each of the servers, to allow updates to be made from SPC.
3. Member country staff trained in the new version and the support of the SQL Server.

Budget
Funding is sought to cover the costs of travel for one person to each of the countries in order to complete the installation. Countries will be grouped together in order to minimise travel costs. It's expected that one week per visit should be sufficient to complete the setup and train staff in the essential elements of the new system. Some countries may require a longer visit in order to address other issues for that country or provide extra training, which the OFP will fund from it's normal travel budget.

Travel Plan and costs

Cost Item	Cost (US$)
1. Cook Islands / Vanuatu Fishing Co (NZ), Niue	$8,400
2. Kiribati / Tuvalu	$5,900
3. FSM	$4,500
4. Palau / Marshall Islands	$7,600
5. Philippines	$3,000
6. Solomon Islands / Nauru	$5,400
7. Tonga / Fiji	$5,000
8. Vanuatu	$1,700
Sub-Total	**$41,500**
SPC Project Management Fee (15%)	$6,225
Contingency	$5,000
Total	**$52,725**

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