



Billing and Metering Tool
(case study)



Company Profile

The revolutionary First Indian Language Portal www.webdunia.com was launched in the year 2000. Webdunia has played a very critical role in advancing language content in the country along with specializations in providing the Localization Services, Mobile VAS, Language Technology, Enterprise & Web Solutions.

Business Situation

Billing system at many cybercafés is manual. Hence cybercafé administrators find it difficult to bill the customers properly for the duration which they have spent in the cybercafé.

Solution

Using the Billing and Metering Tool, you can accurately track and manage rental time and revenue on all your Shared Access Site PCs with easy-to-use reporting and monitoring features.

Benefits

- Accurate billing
- Easy to configure & use
- Context sensitive help
- Multilingual support
- Dashboard to monitor
- Quick reference sheet
- Content Localization

Using the Billing and Metering Tool, you can accurately track and manage rental time and revenue on all your Shared Access Site PCs with easy-to-use reporting and monitoring features.

The Billing and Metering Tool (BMT) is software for management of shared computers. This tool helps owners of Shared Access Sites monitor and bills their customers for the use of the shared computers.



Situation

system at many cybercafés is manual. Hence cybercafé operators find it difficult to bill the customers properly for the duration which they have spent in the cybercafé. In addition to this, they also find it difficult to keep track of usage of other services like printing services, scanning, or food and beverages.



Situation

These days' lots of people visit various cybercafés to access internet. In the absence of any automated billing system, cybercafé administrators find it difficult to bill the customers properly for the duration which they have spent in the cybercafé. In addition to this, they also find it difficult to keep track of usage of other services like printing services, scanning, or food and beverages.

Solution

The Billing and Metering Tool (BMT) is software for management of shared computers. This tool helps owners of Shared Access Sites monitor and bills their customers for the use of the shared computers. It can also generate usage and billing reports for these computers. It is typically used to manage rental computers in small- to medium-size Shared Access Sites.

Why use the Billing and Metering Tool?

Using the Billing and Metering Tool, you can accurately track and manage rental time and revenue on all your Shared Access Site PCs with easy-to-use reporting and monitoring features.

The Billing and Metering Tool enables you to quickly gather data on current machine usage throughout your Shared Access Site's Local Area Network (LAN), create receipts for customers, and generate usage and billing reports to help maximize revenue and efficient use of your Shared Access Site's resources. Specifically, you can:

- Set up billing rates, including discount and tax rates.
- View which computers are currently in use and which are currently open.
- Monitor detailed usage status of any computer in use, including start time, end time, and current billing amount. Create usage & billing reports.
- View or print receipts for a computer's usage and for any additional services you define, such as printing services, scanning, or food and beverages.

How does the Billing and Metering Tool work?

The Billing and Metering Tool (BMT) consists of two software tools: a User PC application and an Admin application. The User PC application is installed on each monitored computer across the Shared Access Site's LAN and records in the background each computer's usage data into a Microsoft® SQL Server® 2005 Express Edition database. (Note: The User PC application has a very small footprint and does not affect the performance of the computers on which it is installed.) The Admin application can be installed on any computer on the LAN and is used to access this usage data so that the Shared Access Site's administrator, manager, or owner can get a quick overview of machine usage or can generate reports on usage patterns. The Admin application can also be used to generate customer receipts.

Billing and Metering Tool is localized in 10 International Languages – Arabic, Bahasa Indonesia, Bahasa Malay, Brazillian Portuguese, English, French, LATAM Spanish, Russian, Thai, Turkish and Ukrainian.



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Here are more details about how each application works:

Admin application:

System administrators, owners, managers, or other employees of the Shared Access Site use this application to monitor usage and billing information for all machines on the Shared Access Site's network, to create and print receipts for customers, and to generate billing and usage reports. Shared Access Site personnel can also use this application to configure and define settings for the system, such as bill rates, additional services, database connection information, and passwords. The Admin application must be installed on at least one computer on the Shared Access Site's network, but can be installed on as many or as few machines as needed. Admin application enables the administrator to take back up of Shared Access Site data which can be restored in case of database failure. It also allows administrator to schedule application for taking automatic backups of the data at regular intervals of time.

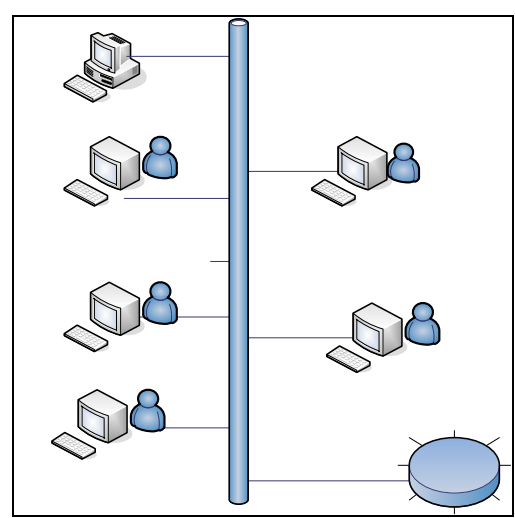
User PC application:

When a user logs on to a PC, this application records the start time of the user's session, and then periodically reports the status of the machine to the database until the user logs off. As long as the session remains active, the User PC application continues to log status information, even if the links to the database and Admin application are temporarily disconnected. After the user logs off, a history of this session is stored in the database for reporting and billing purposes. While the User PC application is running and a user is logged on, a small status window is displayed above the Microsoft Windows® notification area that reports how many hours and minutes have elapsed since the start of the user's session. The User PC application is hidden from users, though the administrator can open the program at any time using a hot-key combination together with the User PC application password.

Technology Used

- Operating system: Microsoft Windows XP with SP 2 operating system (any edition)
- Database environment: Microsoft SQL Server 2005 Express Edition
- Application environment: Microsoft .NET Framework 2.0 SP1

Solution Architecture



Date Time Format, Currency Symbols and Decimal Notation are as per selected language.



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Multilingual/Unicode Support

The application supports following languages:

- Arabic
- Brazilian Portuguese
- Bahasa Indonesia
- English
- French
- Malay
- Russian
- LATAM Spanish
- Thai
- Turkish
- Ukrainian

Application Globalization

Approach

For this application 3 different approaches have been followed depending upon the need.

For forms

All the localized strings are contained in language specific resource files. Apart from localized text these resource files contain the UI specific properties such as control font, height width etc. for a language, so that the UI does not get disturbed on changing the language. The language can be changed from the Admin application, also during the setup user can select the language.

For reports & application messages

The application has been developed using Visual Studio 2005. As Crystal Reports for Visual Studio 2005 does not have built in feature for localization, language specific resource files have been used to get the localized strings; also the application messages are stored in this file. The resource files in this case only contain language specific data & not control specific properties like height, width etc.

For help

For help, there is one help file (.chm) for every language to have Unicode support at database level; the datatypes nchar/nvarchar has been used.

Other Characteristics

Date Time format, Currency Symbols and Decimal Notation are as per selected language.

Content Localization

Content Localization for the MS Billing and Metering Tool consisted of total six different stages. The stages are as follows;

- Extraction of localizable strings.
- Analysis of the file to be localized
- UI Localization
- UA Localization
- Docs Localization
- LQA

Please find the brief details of the above stages below;

Extraction of the localizable strings

- In this stage we extract all the localizable UI strings from the `the files to be localized.

Analysis of the file to be localized

- All the raw files (UI, UA & Docs) to be translated are analyzed against a blank TM to get the approximate volume of the project using Cat tool available. The details about all the fuzzy matches are stored in the log report.
- Then Style Guide and Glossary is prepared by individual Language experts.
- Our Engineers then create a list of all terminologies (Product and service) names which has to be retained in English.
- Other specific guide lines are prepared such as translation of Windows navigation path in a specified format etc.
- The files to be localized are then categorized in to UI, UA and doc files and push forward for translation in a sequence.



Current Situation

system at many cybercafés is manual. Hence cybercafé operators find it difficult to bill the customers properly for the time which they have spent in the cybercafé. To solve this problem, we have developed a Billing and Metering Tool, you can accurately track and



UI Localization

- The file containing the UI terms are filtered for sorting out the duplicate/repeated strings.
- Then we get all the repeated UI strings translated from our native language linguist.
- The translations are stored in a database, mainly known as TM (Translation Memory).

Please Note: *Translation Memory is provided by our linguist after completion of every stage to measure the accurate volume.*

- Upon receiving the TM and the localized file, we auto translate them for localizing repeated terms. Once repeated terms are localized, remaining content's volume is measured once again.

Please Note: *Auto translation is done using CAT tools.*

UA Localization

- The content of UA files are extracted in .htm formats.
- The .htm files are then forwarded to the linguist team for translation along with the new log report.
- The deliverables we receive after localization of this stage are clean, unclean and TM file.
- Upon receiving all the localized .htm files, our Engineers compiled them to a chm (Compiled help manager).

Documents Localization

- In this stage the doc are localized separately with all guide lines in place.
- Once this is done we are through with the localization process of the Product. To ensure quality and consistency across different stages we then process the GUI/build screen shots for linguistic QA.

Language QA

- In this stage our linguists performs a thorough checks for linguistic quality of the localized build.
- The process includes taking screenshot from the localized build and sending them to the linguist along with the source screenshots to have a proper reference of the context of the translation and appearance of the localized strings during run time.
- The process is repeated twice to maintain consistency and regression of the fixed terms.
- In this stage all the cosmetic and non cosmetic issues are identified and fixed.

With this we complete the content localization of the product at our end.