

## Speed tart

The steps below outline a basic setup sufficient for most users. If you just want to record software usage and nothing else, skip down to "• When ready to view ...".

Create Projects to represent the clients or categories for which you want to record work time. Click on the METER menu, then select "Other..." from the Projects submenu. Enter a name, then click "Create". Enter a second name if you want and click "Create" again. Repeat for as many Projects as you wish to track. Click "Charges" to add time-billing to any project (see below).

Set rates for time-billed Projects. If the "Earn" dialog is not already on-screen, select "Earn" from the METER menu and select a Project from the popup menu. Click "Rate" and enter an hourly charge. To enter a non-time-based charge, click the "Item" checkbox, enter a description, charge, and multiple, then click "OK" to confirm. Repeat the process with as many items as you like.

Switch between Projects as you work. Select from the METER menu's "Projects" submenu to mark when you stop working on one Project and switch to another. Just select the new Project's name ... a checkmark should appear beside the one currently active. (You can always create a new one by choosing "Other...".)

Record documents in the applications you use most. Open a sample document and select "Documents..." from the METER menu. Make sure the current application is showing in the topmost popup menu, then select the sample document name from the "<list current windows>" popup menu. Click the "Record" button below, then click "Done". All docs of this kind will now be recorded.

- When ready to view your collected data, select "Open METER..." from the METER menu.

Select a calendar period. Click on the "Apps" icon, then click on a day on the calendar (or click-drag to select a range of days). Each application's usage will normally be summarised in a single line, so if two or more Projects have used the same program, the "Project" column will show a subtotal like "(3 projs)". If you instead want to summarise app usage by Project, use the "Report" popup menu. The same applies when you click on "Docs" or "Tasks", except that the display will normally be summarised by "Name".

Import data from other Macs. Assuming METER is already installed on other Macs on your network, you can easily access their data. Just select "Gather" from the Mac menu, wait a few moments for other Macs to report in, then select "All" from the same menu. If errors are reported or data is not received, close METER, reopen it, and try again (you don't need to select "Gather" if the other Macs are already registered in the menu).

Sort and format the display for output. Option-click on a column title to summarise the list accordingly (see previous paragraph). The current summary column is titled in italics. Click on a column title to sort the list; the current sort column is titled in boldface. Use the "Calculate" menu to view your usage data in various statistical or graphic forms. Use the "Output" menu to format the list for output: select either PICT or TEXT; suppress colour, icons, titles, totals; force all times to be written as fractions of hours (for spreadsheets); and copy, save, or print the displayed data.

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METER installs itself into your system software during startup. It uses less than a tick (1/60th of a second) every 5-15 seconds to collect its data, whenever your Mac is not busy with other tasks. It saves its collected data during idle times (30+ seconds since your last mouse or key action), or when you shut down your Macintosh.

METER's use of system resources is summarised in the Message line on the main display. It tells you the percentage of your Mac's processing time spent in METER's routines; the RAM used by METER's code and data; and its data file size. (The grey line under the Message text serves as a 'thermometer' to display the progress of file operations. Only very large selections or data-collection over a network will take more than a second or two.)

Data is stored in a file called 'METER Data' in your Preferences folder. The file grows quickly to 50-100K, but later its growth slows as daily records are archived into weeks, weeks into months, and so on. (See Mac etup.) As with all software, please make regular datafile backups to ensure that your information is safe. We also suggest that you export your data to a word-processor or spreadsheet before any major system upgrade.

METER is not an application and therefore does not have its own memory partition. You should have at least 100-200K of RAM free when you open the METER control panel. If you plan to view many weeks' or months' worth of records, more free RAM may be needed. For large data collections over a network, you may need over 1Mb of free RAM.

## Definitions      Fig.2

METER records all refer to a calendar period, a Mac, a Project, a Software type, a name, and some usage data. The example above shows a document that was in use from 7:53 - 8:57 pm, on a Macintosh named "Michelle", for project "Guide", created by HyperCard, titled "METER Clips."

Macs are computers running the Macintosh OS on a network. (Mac controls do not appear in the single-user version of METER.) Normally a Mac's name will be the same as that shown in the Sharing Setup control panel, unless you change it in the Mac etup screen.

Projects can represent users, clients, categories, or whatever you like. Each project will accumulate records of application and document use, of tasks performed, of charges accumulated. You can create as many projects as you like, but only one project is 'active' and generating records at any time. You can change your current project at any time using the METER enu. You can also move work records between different projects (see Viewing our ours).

Software identifies the kinds of applications and documents you use, and also shows what programs were running when task or billing records were generated. METER refers to software by its four-letter signature (e.g. SimpleText = 'ttxt'), its icon, and sometimes its name.

Groups are not a separate kind of data, but are a quick way of selecting multiple Macs, Projects, or Software (see Group etup). For example, you might define a software Group named "(Internet)" which includes all of your surfing applications, or a Mac Group named "(accounting)" which lists only the Macs used by your accounting department.

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The five first icons in METER's control palette represent its record types. Apps, Docs, and Tasks identify WHAT you were working on WHEN; Earn and Share identify HOW MUCH your time was worth. Click on an icon to switch your data display.

Apps are applications recognised by the operating system, including a few drivers and extensions. METER watches key and mouse activity to record the time you spend working in an application, how long the app is the active (front) program, and how much time it demands from the central processing unit (CPU).

Docs are user documents, or actually document windows. METER records how long you actively work on a document, and how long the document window is open and frontmost. To set which applications' windows you want to record, use the Documents dialog.

Tasks are work periods as declared by the user. Again, METER records how long you actively work on the task, and how long the task is "open". The same task may be performed in different projects, and you can optionally set a task-specific billing rate that differs from a project's normal rate. To define a new task or switch to an existing one, use the Tasks dialog.

Earn records are created when you bill projects for your time or services according to:

- hourly rates (based on time that apps or docs are open or in active use)
- periodic fees (subscription-type charges)
- flat price (one-time, maximum charge)
- item charges (includes name, price, & quantity)

Hourly charges are pro-rated: that is, a project that you bill \$60/hour will show \$2 owing for 2 minutes' time, or \$120 for 2 hours. Periodic fees are calculated on a minimum-charge basis: a project that you bill \$60/day will show \$60 owing whether you worked 2 minutes or 2 hours that day. To create a billing item or to adjust billing options, use the Charges dialog.

Share records represent shared software costs, for you to pay (or not) as you choose. (See Network services.) Like Earn records, Share records can be hourly rates, periodic fees, a flat price, or item charges. For example, you might use this function to distribute the costs of a new software program among the groups or projects that will be using it. Third-party software may also summon METER's Charges dialog to propose pay-per-use billing. You can shut out such requests or alter their terms as you wish.

Notes — FOR FUTURE DEVELOPMENT