

Using Cost Recovery Systems to Capture and Bill for Fax/Telecopier

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In this document...

All references to “Extract – Transform – Load” refer to ETL as is practiced in an Expense and Cost Recovery System.

Host Billing System refers to the Accounting package used by a business to bill their clients.

Cost Vendor System refers to third party data collection and tracking packages such as “Equitrac”, “Infortext”, “Danyl” and “CopiTrak”.

Fax transactions are special because they generally contain not only a page count, but the cost of the telephone call for the time the fax machine was on the phone. The page count gets calculated against a flat rate -- such as \$2 per page -- or a tiered rate -- such as \$1 for the first two pages and \$.25 for each additional page. These rates can be maintained in a dedicated Expense & Cost Recovery System (ECRS), but are applied globally, that is, to all clients, customers, accounts and, internally, departments, divisions and employees..

The options for pricing the charge for the Host Billing System are as follows:

- 1) multiply the per page cost (flat or tiered) and add it to the toll charge;
- 2) multiply the per page cost (flat or tiered) only
- 3) use the toll charge only
- 4) charge a fixed rate for each fax session (such at \$5 per faxing)
- 5) charge a fixed rate for each fax session and add it to the toll charge

After the Extraction stage, a “flat” rate can be easily multiplied against the page count to acquire the total value for the charge during the Transform stage.

When charges are sent to the Host Billing System, during the Load state, the disbursement code (or “cost code”) contains the ultimate rule for the pricing of the fax session based on firm rules and the Host Billing System’s capabilities.

If an interim disbursement rate table (Transform) indicates that fax entries are a straight "Amount", then the dollar value in the charge will be multiplied against any rate factor indicated. That factor is usually 1.0, but can mark up a charge, say by 1.15 (so that a \$6.00 charge becomes \$6.90) or discount it such as .85 (so that a \$6.00 charge becomes \$5.10).

If the disbursement table indicates "Units" (quantity or page count), then only the quantity of pages will be Loaded into Host Billing System and that will get multiplied against any rate (or “exception rate”) as indicated by the disbursement

or cost code. If that rate factor is \$1.00, then a 6-page fax will be \$6.00. If the factor is .80, then a six-page fax is \$4.80.

By using the two types of value, Amount or Units, the Transform stage's -- or the Host Billing System's -- rate tables can be assigned for customers who have negotiated the page cost only when the standard tables have clients paying the page cost and the toll charge.

Note: For law firms and the legal industry, in general, the American Bar Association "ethics in billing" recommend that charging for facsimile or telecopier expenses should be, first and foremost, based on the cost of the telephone call alone. As there are no real materials or productions costs associated with faxing, the ABA suggests a per-page rate is only suitable where no phone call pricing is available.

Here are some suggestions for taking care of the fax transactions in the Extract stage phone data files. The optimum choice (in order of priority) is for...

- 1) ... the Fax machines to NOT go through the phone switch, not occupy an extension, but go directly out (and in, since they probably have a rotary or hunt group on the fax number) on separate phone lines.
- 2) ... OR the phone switch to maintain a list of extensions that do not need to be reported (skipping the Extract stage).
- 3) ... OR the Cost Vendor System to keep that list and not price those calls nor send them to the Transform stage (the ECRS).
- 4) ... OR the ECRS to automatically filter out fax extensions (and client account numbers if necessary) to skip the Transform stage and, ultimately, passed to the Load stage (for Host Billing System). **[An ECRS can use either a "discard" flag for small lists of numbers or an "exclusion" file which is more global, based on dialing patterns.]**

It is extremely difficult to logically, automatically or programmatically match up a phone call from a fax machine with the actual fax transaction in an ECRS. There is generally insufficient information from the Extract stage to make the connection or link between the two and the fact that the phone switch clock will probably not be in sync with the fax machine nor the computers involved, times can be out of order or sequence and not easily compared.

In Cost Vendor System systems, costs such as copies, faxes, postage, meals, etc. all come through terminal key pads where the user identifies himself/herself with an ID number and manually types in the client number or account code for billing purposes. Both of these numbers are validated against lookup tables which are generated by the Host Billing System.

[An ECRS can often do this step by extracting the pertinent data from the Host Billing System and sending it out to the Cost Vendor System's application, database or PC. However, this is outside the scope of ETL.]

The transactions should be recorded and Extracted, at least once a day, to a file which is what we used to be Transformed while in the ECRS and, ultimately, get Loaded into the Host Billing System.

In some firms, both photocopy and fax are put into disbursements (or "costs") for the Host Billing System which contain the page quantity or count so that they can be priced there. This allows a company to maintain custom (or "exception" rates) for certain clients or types of accounts in the Host Billing System. The rule for sending and accepting counts versus amounts is usually based on how the disbursement (or "cost") code is configured in the Host Billing System.

For telephone calls, any employee can pick up any phone extension and dial an access code -- which is hopefully a valid client number or account code, but this is not enforced -- and then the employee dials the phone number. The employee is not identified, though. There is no method of doing so.

The only connection that can be made is between the calling extension number and some list of employees which has one person per extension. However, any extension is "valid" in the phone system thus any extension number AND any client or account number found in a phone call transaction is just passed through the Cost Vendor System system. They do not get validated because it is common knowledge that most phone systems will allow any numbers to be entered.

Calls are then priced based on the duration and the destination (local, long distance, international, etc.) and about the only piece of information that is added to (or modified by) the Cost Vendor System is the cost of the call. The phone transaction record is then Extracted to a file which, like copy and fax, is sent to be Transformed by the ECRS and, ultimately, Loaded into the Host Billing System.

A call from a fax extension never contains the client number or account code because a fax machine does not have to use such numbers to dial out. While it is true that a user must identify himself/herself to the Cost Vendor System fax terminal and the user must further enter a valid client number or account code, these are not "punched into" or dialed by the fax machine in the process of making a phone call to another fax.

Therefore, not only are reviewers in Accounting later unable to determine the client number or account code to which the phone call should be billed, they cannot even identify the person who operated the fax machine using the phone call transaction. The information is not there.

So, a business can either have the Cost Vendor System price the cost of the call as part of their fax interface (which may not be occurring currently) or companies can rely on a basic per-page rate to cover the cost of long distance charges.

WARNING: If you choose to have the Cost Vendor System store the price in addition to the page count in the fax transaction, you will lose the "granularity" of having the page count detail. When an ECRS receives Extracted fax transactions with both a page count and a price -- depending on the firm's wishes, of course -- the Transform stage normally multiplies the number of pages by a single, flat, fixed rate per page and adds that total to the cost of the call. When the ECRS Loads the fax disbursement (or "cost card") into the Host Billing System, it has to send the dollar value instead of the page count.

Most Host Billing Systems cannot accept both the count or quantity and the price or cost. Usually any amount in disbursement (or "cost card") "value" field will override any number in the "count" field.

Most Host Billing Systems cannot recalculate the total page value based on the rate and add it to the amount in the "value" field. This would normally have to occur during the Transform stage, in an ECRS. Regardless, firms may lose any ability to maintain those exception rates that clients may have contracted.

Be aware that most Cost Vendor System work the same way and that most Host Billing Systems operate in a similar fashion for disbursements or costs, too.

And, if a business chooses to use desktop or PC-based faxing, the same situation will occur with one additional restriction: desktop fax applications do not price the cost of a call; they just provide the page count. This means -- were a business to change what it is doing now -- that company would have to maintain two separate methods of billing for faxes: machine faxing for which the Cost Vendor System could also insert the cost of the call into the fax transaction record, and desktop faxing with which limits to just the page count.

There are firms working with Cost Vendor Systems to "feed" their desktop fax data through those tariff or pricing systems. In these cases, the transactions get Extracted and come through the ECRS without being Transformed before they are Loaded into the Host Billing System with values as if the fax was generated by one of the Cost Vendor Systems terminals.

Currently, with this one example, due to both the lack of a price from the Cost Vendor System, the inability of the desktop application to price long distance, and the use of special rates within the Host Billing System, page count is the only basis of charging for faxes.

A company would have to do all of the above changes AND alter the disbursement or cost code to allow a dollar amount instead of a page count to be the default value factor for faxes.

The normal procedure, then, is for either the phone switch, the Cost Vendor System or the ECRS to stop "redundant" transaction records from coming in for the same occurrence: a single fax transmission (so either prior to the Extract stage or during the Transform stage).

It's easiest (and best) for firms to have their ECRS do the filtering or excluding of the fax extensions during the Transform stage so that calls from those extension numbers don't come through from as both a billable fax charge and an "un-resolvable" phone charge (which won't get billed to anyone).

Within an ECRS, companies can often maintain the list of both special (fax) extensions and of special-handling phone numbers.