From: Zadina, Tim P.
Sent: Monday, November 30, 1998 7:46 AM
To: Heinl, Steve
Subject: FW: missing value algorithm reference

fyi
-----Original Message-----
From: Blick, Jim
Sent: Friday, November 27, 1998 11:39 AM
To: Shaul, Leon
Cc: Van Alen, Ben; Zadina, Tim P.
Subject: missing value algorithm reference

Leon,

Here's some lines that you may want to edit for brevity and to make them fit your application:

Missing values were filled in under the assumption that the expected count is determined by a given year and stream in a multiplicative way (i.e., counts across years for a stream are multiples of counts in other streams, and counts across streams for a year are multiples of counts in other years). The estimated expected count for a given stream in a given year is then equal to the sum of all counts for the stream times the sum of all counts for the year divided by the sum of all counts over all streams and years. If there is more than one missing value, an iterative procedure, as described by Brown (1974), must be used since the sums change as missing values are filled in at each step.

Ref:

Brown, M.B. 1974. Identification of sources of significance in two-way contingency tables. Applied Statistics. 23:405-413.

Note: The algorithm used is an example of the EM algorithm which is a generic algorithm used to compute maximum likelihood estimates. I am finding that most people understand the above paragraph, whereas the term "EM algorithm" doesn't mean much to them.