



Center for Clinical Trials

Department of Biostatistics
Department of Epidemiology
Department of International Health

Department of Medicine
Department of Ophthalmology
Oncology Center

Wednesday, 2 November 2005

Memorandum

To: Center for Clinical Trials Students, Staff, and Faculty
Fr: Curtis Meinert
Re: Tables 101: Targeting and Referencing

Consider the following definition in my dictionary:

randomization breakdown *n* - A **breakdown** (defn 2) in **randomization** (defn 1) because of failure to follow the treatment assignment schedule as determined by a given random process, eg, as a result of using assignments in an order other than the one indicated.

Note that it references a particular definition for **breakdown** and also one for **randomization**. There are hundreds of such connections in the dictionary.

One could, of course, "hardwire" the connections, but that would be a constant royal PITA. One would have to "rewire" basically every time entries to definitions were added or deleted. For example, the reference to defn 2 for **breakdown** would have to change to "defn 3" if one added a definition in front of defn 2.

Clearly, one needs a better management tool than "hard wiring". The tool is "targeting" and "referencing" – a tool enabling the system to generate the defn numbers being referenced.

Consider the entry:

breakdown *n* 1. The act or process of breaking down or failing to function; the condition resulting from such breakdown or failure. 2. Departure from an accepted **norm**, process, or procedure, as in **randomization breakdown**.

If the underlying code was to be examined, one would find that the numbers "1." and "2." are "floating" paragraph numbers and one would also find the code "**Target(345 BREAKDOWN)**" right after "2.". The code in **randomization breakdown** is "**[Ref(345 BREAKDOWN):Par 2]**". It is that code that instructs the system, during generation, to produce the paragraph number identified by "**Target(345 BREAKDOWN)**". The defn number represented on the screen by **[Ref(345 BREAKDOWN):Par 2]** will appear as "?" until the document is generated.

There should be no unconnected references in finished documents. The existence of "?" after generation means that there is no target corresponding to the reference or that there is a code mis-match. For example, the code "**[Ref(345 BREAKDOWN):Par 2]**" will not generate because of the space separating 345 and BREAKDOWN.

The target has to be after the number being referenced and before the next floating number in the document. Inserting a new floating number in front of the target will result in generation of an errant reference number.

One use of the targeting and referencing feature of WP in monitoring reports is in regard to continuation headers. The table number needs to be targeted and the number has to be referenced in the table header to generate the number in the continuation header.

The other principal use of the feature is referencing in manuscripts. The steps in creating a floating reference number are:

1. Create the reference citation with a floating number
2. Give the number a target name
3. Insert the reference code where the reference is cited

One soon discovers, after keying a few citations, that it is useful to have reference templates with macro prompts to ensure proper keying and for creating and inserting target and reference codes. In the sample citations below, the target names are displayed on the index lines following citations. The numbers in bold, flushed right, indicate the page or pages on which the reference is cited. To make that feature work, one has to target reference codes in the body of the dictionary and has to reference those targets on index lines in the bibliography.

1. **Aickin M: A program for balancing the allocation of subjects to treatment in a clinical trial. Computers and Biomedical Research 15:519-524, 1982.**
(Aickin, 1982) **199**
2. *The American Heritage Dictionary, 2nd College Edition.* Houghton Mifflin Company, Boston, 1991.
(American Heritage, 1991) **xix, xlvii)**
3. **Anderson LK, Hendershot RA, Schoolmaker RC: Self-checking digit concepts. J Systems Management 25:36-42, 1974.**
(Anderson et al, 1974) **46**

Consider reference 3 cited on page 46 of the dictionary. If we were to go to page 46 we would see the following:

check digit *n* - A **digit** that is affixed to a numeric identifier, eg, an **identification number**, typically the last digit of the identifier, that is used to identify recording or keying errors; done by comparing the value of the check digit, as computed for the identifier as issued, with the one computed for the identifier as recorded or keyed [Anderson et al, 1974;³ Fellegi and Sunter, 1969;⁵⁰ Smythe, 1968;¹⁵² Selmer, 1967¹⁴⁷]. syn: self-checking digit

If we were to look at the code in the "Anderson et al" listing in the bibliography we would find "**Target(ANDERSON ET AL, 1974)**" right after the floating paragraph number "3" and "**[Ref(ANDERSON ET AL, 1974;Par:3]**" in the definition for **check digit** after "Anderson et al, 1974;³" in the definition. Immediately following the reference code in the text is the target "**[ANDERSON ET AL, 1974PG]**" and on the index line for "Anderson et al" in the bibliography is the code "**[Ref(ANDERSON ET AL, 1974;Pg:46]**".

The process implied by this illustration can be "automated" with macros. For example, the reason for displaying the target name on the index lines of the bibliography listings is to allow a macro to "copy" the target name and for it to use it to create a corresponding reference code in text where the listing is cited.

The page numbers on index lines of references in the bibliography provide a ready means of locating text citations and as a check for "rogue" listings. Any listing in the bibliography with "?" for page number indicates a reference not cited anywhere in the dictionary text. They indicate the need to delete the reference from the bibliography, to connect the listing to a definition, or to resolve a code mismatch.

The same structure works for manuscripts. The indexing helps to arrange citations by order of use. If one wants to hide the index line when the manuscript is submitted for publication, enclose the line in a paired style in order to print in white in the submission version or use the "hidden text" feature.

A note of caution: Leastwise, one be tempted to use the endnote feature of WP to number citations, DON'T! The endnote feature works only if each and every reference is cited once and only once. The numbering will be out of synch when and if a particular reference is cited more than once.

(Thu 7:53am) 11 Aug 05

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