When will there be a single taxonomic name server, or, Who Will Bell the Cat?

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Practicing systematists are struggling to find an effective and efficient way to put their work online so that it is available both for the systematic community and for all the other “consumers” of taxonomic work. At present, there is a bewildering array of online taxonomic repositories. It is entirely unclear that investment of time and data into one repository will propagate elsewhere. That impression of isolation between repositories is not encouraging systematists to contribute their best work. How do we fix that so that online taxonomic information reflects the best taxonomic science in a timely and accurate way?

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Once upon a time, the Mice met in Council to decide how best to outwit the Cat. After long debate, a proposal to tie a bell to the neck of the Cat was adopted with warm applause.

The wisest Mouse of all then stood and said, “This clever plan will surely work… but who will bell the cat?”

Access Problems
• Overlapping resources
• Incomplete taxonomic coverage
• Indeterminate authoritativeness

Input Problems
• Duplication of effort
• Differing data fields
• Lack of awareness among systematists of where best to put online resources

Solution Part I: Unify Access to Names

OPTION A — A GRAND UNIFIED TAXONOMIC server
• Not likely to happen (or even desirable) for a plethora of social, political, and technical reasons
• The great diversity of needs dictates a diversity of services that will continue for the foreseeable future
• This option is not viable

OPTION B — A NAME SERVER BROKERAGE
• A single service providing pointers to names hosted on other taxonomic servers
• It’s happening: the Global Names Index (globalnames.org) of the Global Names Architecture (gnapartnership.org/gna)
• Allows for multiple stable taxonomic data providers
• Allows for unified access to multiple taxonomic sources from individual taxonomic summarizers

Solution Part II: Require Online Registration

• By analogy to sequence publication in GenBank, require online registration of primary taxonomic publications and revisions
• Make this a condition of funding and development of acceptable repositories
• Serves twin goals: achieves online publication and encourages systematists to demand adequate facilities
• This must be done at the governmental and funding agency level in order to be effective

It’s time for NSF et al. to take up this challenge and make the taxonomic work they fund useful to the world

Benefits
• Diverse taxonomic resources can work together
• Overlaps are immediately visible and comparable
• “Holes” in coverage are patched
• No need for duplicated data entry and updates
• Improved acceptance by systematists

Unsolved Problems
• Authoritativeness remains indeterminate (tracking of changes may help here [see Poster B7])
• Selection and stability of standards:

The nice thing about standards is that you have so many to choose from. Furthermore, if you do not like any of them, you can just wait for next year’s model. (Andrew Tanenbaum, 2002)