**Background**

Whenever users work with the Cadastral Editor, a description of each edit is appended to the database. These edits are not instantly visible to other users of the system. Instead, they remain visible only to the user who made the edits. The intention is that the user would subsequently publish their work to the wider user community. An initial (flawed) implementation of this idea was previously coded (the **File – Publish** menuitem).

This document outlines a more powerful approach that is based on the idea of editing branches. It takes on board the ideas from an inspired technical paper that was produced by Smallworld in the early 1990s (see <http://cfis.savagexi.com/pages/technical_paper_4>).

**What is a Branch?**

A branch has the same meaning as a branch in a revision control system such as Subversion. However, whereas Subversion branches contain a collection of software code, Backsight branches contain a sequence of edits (where each edit is described by an xml document).

The sequence of edits in a branch is strictly append-only. If you need to revise a previously defined edit (e.g. you discover that an observation was incorrectly entered), you can do so using the Cadastral Editor – however, this revision will be represented by an additional edit that is appended to the sequence.[[1]](#footnote-1)

Branches can be arranged in a hierarchy, making it possible to specify an organized data entry regime. For example, you might define branches for the following:

* Branches that relate to the people involved in data entry (e.g. individual operators or workgroups).
* Branches that correspond to the data from specific survey plans.
* Branches that represent different temporal epochs (e.g. 1960s, 1970s).

Backsight will create a new branch whenever you define a new map layer. Layers that are part of a theme will have parent-child links. For example, the Property theme has the following hierarchy:

Survey

Ownership

Assessment

**Editing Sessions**

Whenever you start the Cadastral Editor, you will have to indicate which editing branch you are working with. In normal practice, this will be picked up from the CEDX file that is used to launch the Editor (failing that, the user will be asked to specify the branch).

**Posting and Receiving**

**Database Structure**

1. I believe that the git version control system (see <http://git-scm.com>) also takes an append-only approach. [↑](#footnote-ref-1)