Devicetree Changesets

A Devicetree changeset is a method which allows one to apply changes in the live tree in such a way that either the full set of changes will be applied, or none of them will be. If an error occurs partway through applying the changeset, then the tree will be rolled back to the previous state. A changeset can also be removed after it has been applied.

When a changeset is applied, all of the changes get applied to the tree at once before emitting OF_RECONFIG notifiers. This is so that the receiver sees a complete and consistent state of the tree when it receives the notifier.

The sequence of a changeset is as follows.

1. of_changeset_init() - initializes a changeset
2. A number of DT tree change calls, of_changeset_attach_node(), of_changeset_detach_node(), of_changeset_add_property(), of_changeset_remove_property, of_changeset_update_property() to prepare a set of changes. No changes to the active tree are made at this point. All the change operations are recorded in the of_changeset 'entries' list.
3. of_changeset_apply() - Apply the changes to the tree. Either the entire changeset will get applied, or if there is an error the tree will be restored to the previous state. The core ensures proper serialization through locking. An unlocked version __of_changeset_apply is available, if needed.

If a successfully applied changeset needs to be removed, it can be done with of_changeset_revert().