own goal

The *own goal* command generates the negation of the inspected goal. The negation is recorded as one of two sub-goals of that goal, the other being an unprovable empty sequent to ensure that a proof of the negation is not mistaken for a proof of the original.

$$\frac{[X, ...] \vdash ? \qquad [X, ...]\ normed(ds) \vdash ?\ norm(ds) \land ps \land \neg\ qs}{[X, ...]\ ds \mid ps \vdash ?\ qs}$$

This command is provided to assist exploration of properties, not proof of conjectures.

A proof of a negated goal is a disproof of that goal and also a disproof of all ancestral goals in the proof tree from which the goal was derived by equivalence transformations. (Most of cadiz's proof steps are equivalence transformations, but not all. Exceptions include *cut apart*.) So a proof of a conjecture involving an *own goal* step is a disproof only if that *own goal* step is applied to that conjecture or to an equivalence transformation of it.

1. Tactic example

"own goal" g

This example applies the *own goal* command to goal g.

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