Algebraic Steenrod squaring

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An antidote to the topological approach as exemplified in the Wikipedia entry on the Steenrod algebra. Here we define the Steenrod algebra by its action on the polynomial ring in a countable number of variables. The action is given at the level of the tensor algebra and it is then shown that its kernel coincides with the ideal corresponding to the Adem-Wu relations (the relators are obtained recursively). No topology intervenes as the result is derived from the basic theorems in the subject, algebraic proofs of which are sketched here.