W. Hassler, R. Karr, L. Klingler and R. Wiegand* (rwiegand@math.unl.edu), Department of Mathematics, University of Nebraska, Lincoln, NE 68588-0130. Extended modules. Preliminary report.

Let (R, \mathfrak{m}, k) be a local ring, S a Noetherian ring and $R \to S$ a faithfully flat extension. Given a finitely generated S-module N, when is there a finitely generated R-module M such that $S \otimes_R M \cong N$ (or, more generally, a finitely generated R-module M such that N is isomorphic to a direct summand of $S \otimes_R M$)? We will discuss these questions in special cases, with particular emphasis on the case where S is the Henselization or completion of R. (Received September 25, 2006)