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Peter Ebenfelt* (pebenfel@math.ucsd.edu), Department of Mathematics, University of California, San Diego, La Jolla, CA 92093, and **Linda Rothschild**. *Algebraic and analytic properties of formally finite CR mappings*. Preliminary report.

Let M, M' be CR manifolds in \mathbb{C}^N , and $f: M \rightarrow M'$ a smooth CR mapping. If p is a point on M , one may associate to f at p a formal holomorphic mapping $H := H_f: (\mathbb{C}^N, p) \rightarrow (\mathbb{C}^N, f(p))$. We shall say that the CR mapping is formally finite if the formal mapping is finite (in the algebraic sense). We investigate algebraic and geometric properties of formally finite CR mappings, and obtain, as a consequence, a necessary and sufficient condition for a smooth formally finite CR mapping between real-analytic CR manifolds to extend holomorphically to a neighborhood of the point p . (Received February 06, 2006)