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Joseph J. Kohn* (kohn@princeton.edu), Joseph J. Kohn, Princeton University, Mathematics Department, Fine Hall, Princeton, NJ 08540. *CR manifolds and complex analytic varieties.*

Let r be a real function in a neighborhood of the origin in \mathbb{C}^n with $r(0) = 0$ and $dr(0) \neq 0$. Let I be an ideal of germs of holomorphic functions at $0 \in \mathbb{C}^n$ and let $V = \mathcal{V}(I)$ be the variety defined by I . The purpose of this talk is to present explicit constructions of ideals I so that the order of contact of V with $\{r = 0\}$ is high when the ideal type of 0 is large. The motivation for this is to study the D'Angelo type and generalizations of the Diederich-Fornaess theorem in connection with subelliptic estimates for the $\bar{\partial}$ -Neumann problem on $r \leq 0$ and for \square_b on $r = 0$. (Received July 30, 2007)