1097-13-274 **Paul-Jean Cahen**, **David E Dobbs** and **Thomas G Lucas*** (tglucas@uncc.edu). *Valuative Pairs of Rings.*

An integral domain D is valuative if for each $x \in qf(D)\backslash\{0\}$, at least one of $D \subseteq D[x]$ and $D \subseteq D[1/x]$ has no proper intermediate rings. We extend this notion to pairs of commutative rings $R \subseteq T$ with a common nonzero identity: the ring R is T-valuative if for each $t \in T\backslash\{0\}$, at least one of $R \subseteq R[t]$ and $R \subseteq R[(R :_T t)]$ has no proper intermediate rings. There are weak and strong versions as well: R is weakly T-valuative if for each $t \in T$, either $R \subseteq R[t]$ has no proper intermediate rings or $R \subseteq R[s]$ has no proper intermediate rings for each $s \in (R :_T t)$; R is strongly T-valuative if for each $t \in T$, at least one of $R \subseteq R[(R :_T (R :_T t))]$ and $R \subseteq R[(R :_T t)]$ has no proper intermediate rings. In general, the following implications are not reversible: strongly T-valuative $\Rightarrow$ T-valuative $\Rightarrow$ weakly T-valuative (even when T is the total quotient ring of R). However if R is integrally closed in T, then all three are equivalent. Unlike valuative domains (which have at most three maximal ideals), (strongly) [weakly] T-valuative rings can have infinitely many maximal ideals. (Received January 24, 2014)