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Steven Dale Cutkosky* (cutkoskys@missouri.edu), Dept. Math., University of Missouri, Columbia, MO. *Essential finite generation of valuation rings.*

Let K be a characteristic zero algebraic function field with a valuation ν . Let L be a finite extension of K and ω be an extension of ν to L . We establish that the valuation ring V_ω of ω is essentially finitely generated over the valuation ring V_ν of ν if and only if the initial index $\epsilon(\omega|\nu)$ is equal to the ramification index $e(\omega|\nu)$ of the extension. This gives a positive answer, for characteristic zero algebraic function fields, to a question posed by Hagen Knaf. (Received September 05, 2020)