

On the local uniformization of Abhyankar valuations using toric maps

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We will study valuations on an excellent equicharacteristic noetherian local domain R which are such that the inclusion $R \subset R_\nu$ in the valuation ring induces a trivial residue fields extension and the rational rank of the value group is equal to the dimension of R . Assuming that the residue field R/m is algebraically closed we will give an overview of their local uniformization and stress the fact that not only are they quasi-monomial, but they are toroidal in nature : the valuation ring is the limit of a nested system of birational toric maps between regular local rings.