Berkovich analytic spaces

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Let $(k, |\bullet|)$ be a complete non-Archimedean valued field and H be a subgroup of $\mathbb{R}_{>0}$ such that $|k^\times| \cdot H \neq \{1\}$.

Definition 3.1. Let X be a locally Hausdorff space and τ be a net of compact subsets. A k_H-*affinoid atlas* $\mathcal{A}$ on X with the net τ is a map which assigns

(1) to each $V \in \tau$, a k_H-affinoid algebra A_V and a homeomorphism $\varphi_V : \operatorname{Sp} A_V \to V$;

(2) to each $U, V \in \tau$, $U \subseteq V$, a morphism of k_H-affinoid algebras $\alpha_{V/U} : A_V \to A_U$ representing an affinoid domain $\operatorname{Sp} A_U$ in $\operatorname{Sp} A_V$ such that the following diagram commutes

$$
\begin{array}{ccc}
\operatorname{Sp} A_U & \xrightarrow{\operatorname{Sp} \alpha_{V/U}} & \operatorname{Sp} A_V \\
\downarrow{\scriptstyle \varphi_U} & & \downarrow{\scriptstyle \varphi_V} \\
U & \longrightarrow & V
\end{array} \cdot
$$

We remind the readers that by our convention a compact space is Hausdorff. [Stacks]

Bibliography

[Stacks]   T. Stacks Project Authors. Stacks Project. http : / / stacks . math . columbia.edu. 2020.