② $\left.\begin{array}{l} p : \tilde{X} \to X \text{ rivestimento} \\ X_0 \subseteq X \\ \tilde{X}_0 = p^{-1}(X_0) \end{array}\right\} \Rightarrow p|_{\tilde{X}_0} : \tilde{X}_0 \to X_0 \text{ rivestimento}$

$p : \tilde{X} \to X$ rivest

$\Updownarrow$

① p suriettiva $\Rightarrow p(\tilde{X}) = X$

② $\forall x \in X, \ \exists U \subseteq X$ aperto, $U \ni x \ \wedge \ \exists \{\tilde{U}_j\}_{j\in J} \subseteq \tilde{X}$ aperti $\Bigg|$

$$\Bigg| \begin{cases} p^{-1}(U) = \bigsqcup_{j \in J} \tilde{U}_j \\ \tilde{U}_j \cap \tilde{U}_k = \emptyset, \quad \forall j,k \in J, \ j \neq k \\ p|_{\tilde{U}_j} : \tilde{U}_j \to U \ \text{ omeomorfismo} \quad \forall j \in J \end{cases}$$

p suriettiva $\Leftrightarrow p(p^{-1}(X)) = X$

$\left.\begin{array}{l} X_0 \subseteq X \\ \tilde{X}_0 = p^{-1}(X_0) \\ p \text{ suriettiva} \end{array}\right\} \Rightarrow p|_{\tilde{X}_0}$ suriettiva

Oss 3.1.1 $\Rightarrow$

$\Rightarrow \forall x_0 \in X_0 \ \exists V \subseteq X_0$ aperto, $V \ni x_0 \ \wedge \ \exists \{\tilde{V}_i\}_{i \in I} \subseteq \tilde{X}_0$ aperti $\Bigg|$

$$\Bigg| \begin{cases} p^{-1}(V) = \bigsqcup_{i \in I} \tilde{V}_i \\ \tilde{U}_i \cap \tilde{U}_k = \emptyset \quad \forall i, k \in I \ \ldots \end{cases}$$

$$\begin{cases} \tilde{V}_j \cap \tilde{V}_k = \emptyset, \quad \forall j,k \in I, \ j \neq k \\ p|_{\tilde{V}_i} : \tilde{V}_i \to V \quad \text{omeomorfismo } \forall i \in I \end{cases}$$