

Jan Pelant

Correction to my paper: "Remark on locally fine spaces" [Comment. Math. Univ. Carolinae 16 (1975), 501-504]

Commentationes Mathematicae Universitatis Carolinae, Vol. 18 (1977), No. 1, 211--212

Persistent URL: <http://dml.cz/dmlcz/105765>

Terms of use:

© Charles University in Prague, Faculty of Mathematics and Physics, 1977

Institute of Mathematics of the Academy of Sciences of the Czech Republic provides access to digitized documents strictly for personal use. Each copy of any part of this document must contain these *Terms of use*.



This paper has been digitized, optimized for electronic delivery and stamped with digital signature within the project *DML-CZ: The Czech Digital Mathematics Library* <http://project.dml.cz>

CORRECTION TO MY PAPER: Remark on locally fine spaces,
 Comment. Math. Univ. Carolinae 16(1975), 501-504.

Jan PELANT, Praha

In his review [MR 52#4242], J.R. Isbell pointed out a mistake in the main proof of my paper. The false step of this proof really begins on the page 503₉ by "We may suppose ...". Fortunately, it is not difficult to improve the proof using a finite set J instead the one point set $\{i_0\}$ and to remove an oversimplification at that. The corrected part reads as follows:

"We may suppose that \mathcal{W} is of the form $(i_0 \in J \subset m, \text{card } J < \omega_0; \mathcal{R} \in \mathcal{U} \text{ such that } \forall f: X \rightarrow \mathcal{P} (f(x) \ni x \text{ for each } x) \exists R \in \mathcal{R} \text{ card } f(R) \geq \omega_0): \mathcal{W} = \{ \bigcup_{j \in J} \pi_j^{-1}(R^j) \cap \bigcap_{i \in I(\{R^j\}_{j \in J})} \pi_i^{-1}(T_i) \mid R^j \in \mathcal{R} \text{ for each } j \in J; \text{ for each } T_i \in \mathcal{T}(\{R^j\}_{j \in J}) \}$
 $\{R^j\}_{j \in J} \subset \mathcal{R}$, $\mathcal{T}(\{R^j\}_{j \in J}) \in \mathcal{U}$ and $I(\{R^j\}_{j \in J})$ is a finite subset of m . Choose a mapping $F: X^m \rightarrow \mathcal{X}$ such that $\text{st}(y, \mathcal{W}) \subset F(y)$ for each $x \in X^m$. Let us observe that $I(\{R^j\}_{j \in J}) \supset \{K([F(y)]) \mid y \in \bigcup_{j \in J} \pi_j^{-1}(R^j)\}$ for each $\{R^j\}_{j \in J} \subset \mathcal{R}$. Define $f: X \rightarrow \mathcal{P}$ by $f(x) = [F(\xi_x)]$, $\pi_i(\xi_x) = x$ for each $i \in m$. There is $R_0 \in \mathcal{R}$ such that $\text{card } f(R_0) \geq \omega_0$. As K is one-to-one, it holds: $\text{card } \{K([F(y)]) \mid y \in \bigcup_{j \in J} \pi_j^{-1}(R_0)\} \geq \text{card } \{K(f(x)) \mid x \in R_0\} \geq \omega_0$."

Finally, let us remark that the fact that the Ginsburg-Isbell derivative of a separable metrizable uniform space forms a uniformity cannot contradict our theorem because each separable uniform space has a point-finite base (see e.g.: G. Vidossich: Uniform spaces of countable type, Proc. Amer. Math. Soc. 25(1970), 551-553).

Matematický ústav ČSAV
Žitná 25, Praha 1
Československo

(Oblatum 4.3. 1977)