$$\texttt{TopogicalVectorSpace} :: \prod K : \texttt{Field} \,\&\mathsf{TOP} \,.\, ?\mathsf{VS}(K) \,\&\mathsf{TOP}$$

$$E : \texttt{TopogicalVectorSpace} \iff +_E : \mathcal{M}_{\mathsf{TOP}}(E \times E, E)$$
$$\cdot_E : \mathcal{M}_{\mathsf{TOP}}(K \times E, E)$$

$$\texttt{TVS} :: \texttt{Field} \to \texttt{Category}$$
$$\texttt{TVS}(K) = \mathsf{TVS}(K) \triangleq$$
$$\triangleq (\texttt{TopogicalVectorSpace} \,\&\, \texttt{Hausdorf} \,\&\, \texttt{Locally Convex},$$
$$, \mathcal{M}_{\mathsf{TOP}} \cap \mathcal{M}_{\mathsf{VS}(K)},$$
$$, \circ)$$

$$K : \texttt{Field} \,\&\, \mathsf{TOP}$$

$$\texttt{TopMultilinear} :: \prod I : \texttt{Set} \,.\, \prod E : I \to \mathsf{TVS}(K) \,.\, \prod F : \mathsf{TVS}(K) \,.\, \mathcal{M}_{\mathsf{TOP}} \left(\prod_{i \in I} E_i, F \right)$$

$$T : \texttt{TopMultilinear} \iff T : \mathcal{L}^I(E, F) \iff$$
$$\iff \forall a : \prod i \in I \,.\, E_i \,.\, \forall j \in I \,.\, \Lambda x \in E_j \,.\, T \left(\bigoplus_{i \in I : i \neq j} a_i \oplus_j x \right) : \mathcal{M}_{\mathsf{TVS}(K)}(E_j, F)$$