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ABSTRACTS

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On some spaces of the space of complete linked systems that are manifolds of infinite dimension

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In this paper, topological and geometric properties of the set of complete linked systems are considered.

A linked system ξ of closed subsets of a space is called maximal if it has the following property:

"if the closed set $A \subset X$ intersects every element of ξ", then $A \in \xi$ [1]. (*) A linked system ξ of closed subsets is said to be complete [2] if the following condition is true for any closed set $F \subset X$:

"any neighborhood OF of F contains $\Phi \in \xi$" implies $\Phi \in \xi$ [2].(**)

A system of closed subsets $\mu = \{F_\alpha : F_\alpha \subset X; \alpha \in A\}$ of the space X is called a $k-$linked ($k \geq 2$) if the intersection of any $k-$elements of the μ system is non-empty. those. $\forall \alpha_1, \alpha_2, ..., \alpha_k$, $F_{\alpha_i} \in \mu$,$\alpha_i \in A \Rightarrow \bigcap_{i=1}^{k} F_{\alpha_i} \neq \emptyset$.

Denote by $N_k(X)$ the set of all complete $k-$linked systems (for short, $n_k cc$) of the space X. Therefore, for any natural number $n \in N$ one can define a subspace $N^n(X)$ of the space $N(X)$ consisting of all ncc whose support consists of at most points. those. $N^n(X) = \{\xi \in N(X) : |supp\xi| \leq n\}$.

For a compact X, by $\lambda_\omega(X)$, $N_\omega(X)$, and $N^\omega(X)$ we denote, respectively, the subsets of $\bigcup_{n=1}^{\infty} \lambda_n(X)$, $\bigcup_{K=1}^{\infty} N_K(X)$ and $\bigcup_{n=1}^{\infty} N^n(X)$.

A set $B(Q)$ is called a boundary set in Q if Q\B(Q)$\approx \ell_2$ [3], a topological space X is called a manifold modeled on the space Y or a Y manifold, if every point in space X has a neighborhood homeomorphic to an open subset of space Y.

The following results are obtained:

Theorem 1. For any metrizable nondegenerate continuum X, the following holds:

a) $\lambda_\omega(X)$ is the boundary set of λ(X);

b) $N_\omega(X)$ is the boundary set of $N(X)$;

c) $N_\omega(X)$ is the boundary set of K$\lambda(X)$.

Theorem 2. For any metrizable non-degenerate continuum X we have:

a) $N(X) \backslash N_n(X)$ is a Q manifold, for any n≥ 2;

b) $\lambda(X) \backslash \lambda_n(X)$ is a Q manifold, for any $n \geq 2$;

c) $N(X) \backslash N^n(X)$ is a Q manifold, for any $n \geq 2$.

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