1107-03-267 **Alexandra A. Soskova*** (asoskova@fmi.uni-sofia.bg), Faculty of Mathematics and Informatics, Sofia university, 5 James Bourchier blvd, 1164 Sofia, Bulgaria, and **Stefan V. Vatev** and **Alexander A. Terziivanov**. *Some applications of Marker's extensions for a sequence of structures.* Preliminary report.

In his last paper Soskov gives a generalization of the notion of Marker's extensions for a sequence of structures. Soskov demonstrates that for any sequence of structures its Marker's extension codes the elements of the sequence so that the n-th structure of the sequence appears positively at the n-th level of the definability hierarchy.

We will present some applications of these results based on the notions of conservative extensions of structures and of jump of a structure. We call two structures $\mathfrak{A}$ and $\mathfrak{B}$ equivalent: $\mathfrak{A} \equiv \mathfrak{B}$ if they have the same relatively intrinsically c.e. subsets of the common part of the domains. Given a sequence of structures $\mathcal{A} = \{\mathfrak{A}_i\}_{i<\omega}$ the n-th polynomial of $\mathcal{A}$ is a structure defined inductively: $\mathcal{P}_0(\mathcal{A}) = \mathfrak{A}_0$, and $\mathcal{P}_{n+1}(\mathcal{A}) = \mathcal{P}_n(\mathcal{A})' \oplus \mathfrak{A}_{n+1}$. Here the jump of a structure is appropriately defined. We show that for every sequence of structures $\mathcal{A}$, there exists a structure $\mathfrak{M}$ such that for every n we have $\mathcal{P}_n(\mathcal{A}) \equiv \mathfrak{M}^{(n)}$. Actually $\mathfrak{M}$ is the Marker's extension of $\mathcal{A}$. (Received January 17, 2015)