ALEXEY. G. VLADIMIROV, Effectivity properties of intuitionistic set theory with scheme collection.
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Let $\mathbb{ZFI}_2^C$ is a intuitionistic two-sorted set theory with variables of sort 0 are variables on natural numbers, and variables of sort 1 are set variables.

Axioms of $\mathbb{ZFI}_2^C$ consist of usual axioms and schemata of Heyting predicate calculus (HPC), all usual axioms of Heyting Arithmetic (HA), and all usual Zermelo-Fraenkel axioms for set theory including Extensionality, Collection as Substitution axiom, and transfinite induction as Foundation axiom.

We consider also the additional principle $DSC$ (Double Complement of Sets).

We use some modifications of formalized realizabilities from [1] and proved the following (for $T$ is either $\mathbb{ZFI}_2^C$ or $\mathbb{ZFI}_2^C + DCS$):

1. For $T$: Disjunction Property ($DP$); Numerical Existensial Property ($EP_\omega$); Curch Rule ($CR$); Markov Rule ($MR$); Uniformization Rule ($UR$).

All these properties are proved with set parameters.

Each combination of the following extra axioms can be added to $T$ with preserving of results (i)-(iii) and (v): Church Thesis $CT$, Markov Principle $M$, Uniformization Principle $UP$, and Independence of Permisses $IP$.

2. For $T + ECT$ (where $ECT$ is a Extended Church Thesis): Disjunction Property ($DP$) and $EP_\omega$; the conservativity of $T + ECT$ over $T$ w.r.t. class of all negative formulas; $T + ECT = T + \{R\varphi \equiv \varphi \mid \varphi \text{ is a formula of } T\}$ for a variant of Kleene realizability $R$.

3. For $T + ECT + M$: the conservativity of $T + ECT + M \vdash \varphi$ over $T$ w.r.t. class of all negative formulas; relative consistency of $T$ w.r.t. $T + ECT + M$; $DP$ and $EP_\omega$ for $T + ECT + M$.

4. For $T + nCT + P$: the conservativity of $T + nCT + P \vdash \varphi$ over $T$ w.r.t. class of all negative formulas; relative consistency of $T + nCT + P$ over $T$; $DP$ and $EP_\omega$ for $T + nCT + P$.