A structure of *high order cylindric algebra* is defined by specifying a structure of types.

The type structure consists the basic type 1 and two type constructors (functional symbols over types): product $\times$ and powerset $P(-)$.

For each type $A$ we assume given a supply of variables of type $A$. The variables of type $A$, are usually assumed to form a countable infinite set.

Elementary terms are defined not depending on types. They can be constructed by substitution of variables, i.e. if $z$ is the variable of type $PA$ and $x$ is the variable of type $A$, then $z(x)$ is an elementary term.

High order cylindric algebra is a Heyting algebra together with constants for all simple terms and quantifiers (unary functions) over all variables. There are two quantifiers for each $x$ variable, $\exists x$ and $\forall x$.

Let denote the category of all high order cylindric algebras and structure preserving maps by $HCA$ and a category of all topoi with logical functors as morphisms by $E$.

We construct functors $\alpha : HCA \to E$ and $\beta : E \to HCA$.

**Theorem.**

Functor $\alpha$ is right inverse of $\beta$, i.e. $\beta \circ \alpha = I$.

For each topos $E$, $\alpha(\beta(E))$ is the *minimal* logical subtopos of $E$, which has the same Heyting algebra of subobjects of terminal object as $E$. 