

1039-12-11

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On the preceding ASL's the author had defined product models on a positive Keisler fragment on  $L \langle P, w \rangle$  and proved. Infinitary Fragment Consistency on Algebras. A newer look at models and extensions since the author's 1978 on is to call a primitive set of operations of algebras of a class  $C$  is a set that implicitly defines the remaining operations. Given any class  $C$  of algebras of a given signature  $S$ , a subset  $T$  of  $S$  is called a canonical set for  $C$  when it determines the remaining operations of  $S$ , in the sense that any algebra with signature  $T$  has at most one expansion (same elements but additional operations) to an algebra in  $C$ . Certificates are important to cryptographical mathematics. Product models are a basis to modeling specific fields. Proposition Every prime model has a succinct certificate. Proof follows from the following Lemma 1 The generic diagram defines a succinct certificate for (Initial) prime models in the sense that the model is definable by a primitive set. Theorem 2 Generic diagram define succinct certificates for prime models. References

Nourani, C.F 2005, Fragment Consistency on Functorial Models (A Preliminary) AMS , San Francisco, April 06  
Reference: 1018-18-90 (Received January 23, 2008)