Appendix – Updated CPN Model Protocol Semantics

The new acronyms, names and ColorSets in the updated BlockVoke/ACME Extension CPN model are given in Table 1, while the new functions and initial markings are given in Table 2 and Table 3 respectively.

Table 1: New acronyms, names and colors in the updated BlockVoke/ACME Extension CPN Model

Module	**Name**	**Type**	**Description**
Top–Level	EU_KeyPair	ColorSet (String, RSA-PubKey, RSAPubKey, String)	RSA Keypair of the End–User used for signing new revocations.
Mark Certificate as Revoked	SignedRevocation	ColorSet (Block-Voke_Cert, RFC5280 Revocation Code, INT)	Signed Revocation information, including the certificate to be revoked, the revocation code from the Tx:Revoke transaction, and the signature of the End–User.
	eu_keypair	Variable of ColorSet EU_KeyPair	Variable
	signed_rev	Variable of ColorSet SignedRevocation	Variable

Table 2: New functions in the updated BlockVoke/ACME Extension CPN Model

Declaration	**Description**
`fun signRevocation((n, d), cert_fingerprint) = signRSA((n, d), cert_fingerprint);`	Function used to simulate the End–User signing the Certificate fingerprint using their keypair, before sending revocation information.
`fun verifyRevocation((n, e), cert_fingerprint, rev_signature) = verifyRSA((n, e), cert_fingerprint, rev_signature);`	Function used by the End–User's organisation to verify the End–User's signature of the revoked certificate's fingerprint.
`fun validateCertMultisig(bv_cert) = true;`	Function that symbolicly validates the certificate's multi–signature address.
`fun validateCOpub_address(CSR) = true;`	Function that symbolicaly validates the CO's Bitcoin public Key in the CSR.

Table 3: New initial markings in the updated top–level CPN model of the BlockVoke/ACME Extension

Value Name	**Value Declaration**
initialEUKeyPair	`1‘("EU", (36557, 209), (36557, 173), "eu")`