# XYO Network Encodings: Core Objects

0x02

August, 2018

## 1 Bound Witness (0x01)

A bound witness in the XYO Network.

| Name | Type | Description |
|---|---|---|
| Total Size | Unsigned Int | Size of Entire Bound Witness |
| Public Keys | Array(0x02)< $KeySet$ > | A keyset for every party in the bound witness. |
| Payloads | Array(0x03)< $Payload$ > | A payload for every party in the bound witness. |
| Signatures | Array(0x02)< $SignatureSet$ > | A SignatureSet for every party in the bound witr |

## 2 KeySet (0x02)

A set of public keys for a single party.

| Name | Type | Description |
|---|---|---|
| Keys | Array(0x05) | A multi-typed array of public keys. |

## 3 SignatureSet (0x03)

A set of signatures for a single party.

| Name | Type | Description |
|---|---|---|
| Signatures | Array(0x05) | A untyped array of signatures. |

## 4 Payload (0x04)

A payload contains a set of unsigned and signed Heuristics.

| Name | Type | Description |
|---|---|---|
| Total Size | Unsigned Int | Total size of Payload |
| Signed Heuristics | Array(0x06) | An multi-typed array of heuristics |
| Unsigned Heuristics | Array(0x06) | An multi-typed array of heuristics |

### Index (0x05)

The index in an origin block.

| Name | Type | Description |
|---|---|---|
| Index | Unsigned integer | the index in the origin chain |

### Previous Hash (0x06)

The previous hash in an origin chain.

| Name | Type | Description |
|---|---|---|
| Hash Type Major | Byte | Hash Type |
| Hash Type Minor | Byte | Hash Type |
| Hash | Inferred above | the previous hash |

### Next Public Key (0x07)

The next public key to use in an origin chain.

| Name | Type | Description |
|---|---|---|
| Public Key Type Major | Byte | Public Key Type |
| Public Key Type Minor | Byte | Public Key Type |
| Next Public Key | Inferred above | The next public key in an origin chain. |