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Title: raw() and addr() Output Script Descriptors
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```

Abstract

This document specifies `raw()` and `addr()` output script descriptors. `raw()` encapsulates a raw script as a descriptor. `addr()` encapsulates an address as a descriptor.

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Motivation

In order to make descriptors maximally compatible with scripts in use today, it is useful to be able to wrap any arbitrary output script or an address into a descriptor.

Specification

Two new script expressions are defined: `raw()` and `addr()`.

`raw()`

The `raw(HEX)` expression can only be used as a top level descriptor. As the argument, it takes a hex string representing a Bitcoin script. The output script produced by this descriptor is the script represented by `HEX`.

`addr()`

The `addr(ADDR)` expression can only be used as a top level descriptor. It takes an address as its single argument. The output script produced by this descriptor is the output script produced by the address `ADDR`.

Test Vectors

Valid descriptors followed by the scripts they produce.

- `raw(deadbeef)`
  - `deadbeef`
- `raw(512103a34b99f22c790c4e36b2b3c2c35a36db06226e41c692fc82b8b56ac1c540c5bd4104a34b99f22`
  - `512103a34b99f22c790c4e36b2b3c2c35a36db06226e41c692fc82b8b56ac1c540c5bd4104a34b99f22`
- `raw(a9149a4d9901d6af519b2a23d4a2f51650fcba87ce7b87)`
  - `a9149a4d9901d6af519b2a23d4a2f51650fcba87ce7b87`
- `addr(3PUNyaW7M55oKWJ3kDukwk9bsKvryra15j)`
  - `a914eeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee87`

Invalid descriptors

- Non-hex script: `raw(asdf)`
- Invalid address: `addr(asdf)`
- `raw` nested in `sh`: `sh(raw(deadbeef))`
- `raw` nested in `wsh`: `wsh(raw(deadbeef))`
- `addr` nested in `sh`: `sh(addr(3PUNyaW7M55oKWJ3kDukwk9bsKvryra15j))`
- `addr` nested in `wsh`: `wsh(addr(3PUNyaW7M55oKWJ3kDukwk9bsKvryra15j))`

Backwards Compatibility

`raw()` and `addr()` descriptors use the format and general operation specified in 380. As this is a wholly new descriptor, it is not compatible with any implementation. The reuse of existing Bitcoin addresses allows for this to be more easily implemented.

Reference Implementation

`raw()` and `addr()` descriptors have been implemented in Bitcoin Core since version 0.17.