Draft

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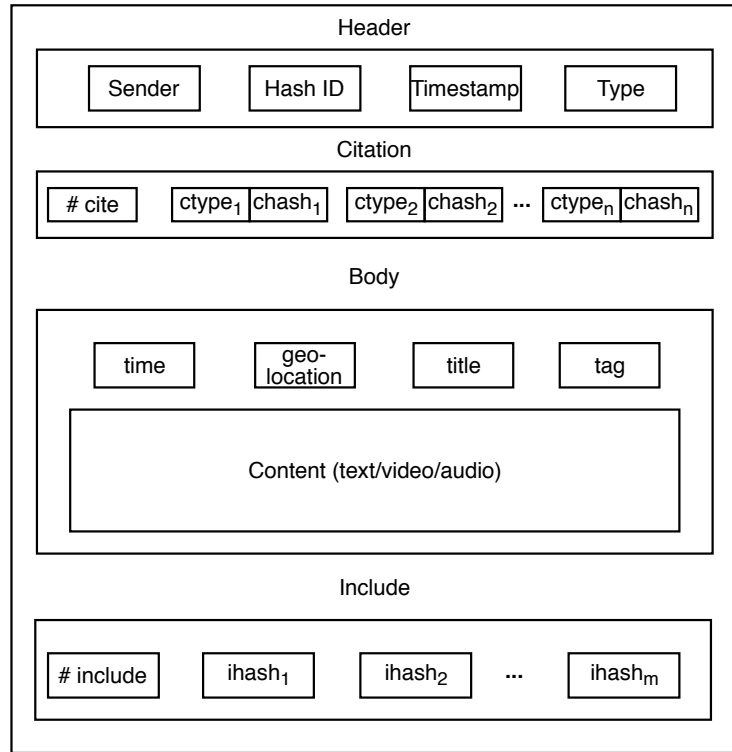# 1 Transaction Structure

UITransaction Structure

Figure 1: UITransaction Structure

We call the transaction that the user post to the blockchain the *UITransaction*(short for User Information Transaction). Figure 1 shows the structure of

UITransaction. There are four main parts in the UITransaction: header, citation, body, and include. The header part consists of several basic information of the transaction.

- **Sender** the address of the user who sends the transaction to the blockchain.

- **Hash ID** the hash value of the transaction.

- **Timestamp** the timestamp of the transaction that is sent.

- **Type** the type of the post. Type has several categories: original, extended, etc. If the type is original, there is no citation part in the transaction.

The citation part stores the information of citation. Note that the number of citation is first stored and it can be used to indicate how long the citation should be read from the user.

- **# cite** the number of citations that the transaction uses.

- $ctype_i, chash_i$ the type and the hash of the citation. $ctype_i$ has several categories that the user can indicate: derive, dissent, cite, etc.

The body part stores the content of the post. First, there are four main attributes: time, geo-location, title, and tag. These information can be used to identify the content efficiently. The *Content* part stores the raw content of the news.

News may include some resources like text or other media resource. The include part stores the information of the included resource. First the **# include** denotes the number of included resource. Then, the hash values of the resource are listed.