Holochain and Holoweb Comparison

Chris Larcombe, 2nd May 2020 (v2)

Holochain	Holoweb
N/A (technically no direct comparison, as "a holochain" is not defined[1])	"a holoweb" (data structure)
N/A (see above)	"the Holoweb" (data structure), set of all holowebs (also, abbreviation of "Holoweb System")
"Holochain application"[1]	N/A (no direct comparison, since 'applications' are defined differently and strongly separated from data)
Holochain (application) DNA containing *code* for validating entries of different types	Holoweb DNA (HDNA) containing *nodes* (holons) for validating nodes. DNA is a "fractal ontology" defining valid nodes/holons, rather than "validation code"
A Holochain (application) is associated with a specific storage method (DHT) and network(s) implementing DHT protocols	A holoweb makes no assumptions about how/where its nodes are stored and communicated (though it may reference different systems). A holoweb may be stored on many systems and may be communicated through many networks. A holoweb could for example be stored in a Holochain application (using a 'Holoweb Holochain DNA' with appropriate meta-data). Different concept/definition of application: a holonic application (holapp), is *not directly or implicitly associated with* a holoweb (which has HDNA).
Immutable DNA	Immutable DNA (HDNA, made of holons/nodes)
Single DHT per Holochain application (and Holochain DNA)	No single DHT (or any storage/communication system) per "application". Application defined differently: 'holonic application' (*holapp*) not directly or explicitly associated with a holoweb (which has HDNA)
Private "source chains" (blockchains[2]) of entries (1 per agent, per Holochain application) and published entries stored in a validating DHT (1 per Holochain application).	Holoweb blockchains[2] (1 per agent, per holoweb) are private or public depending on how they are stored, communicated and encrypted.
Holochain application membrane, defined in a Holochain DNA (associated with a network)	Holoweb membrane, defined as an immutable membrane holon with linked agent nodes, not associated with a network (only associated with public keys of agents defining valid holoweb blockchains)
A Holochain application has no *explicitly defined* purpose (though this could be defined in its DNA meta-data)	Every holoweb has an *explicitly defined* purpose, defined as an 'intention node' within its immutable meta-data (holowebs are teleocentric/agent-centric)
Entries, which are typed, with no explicit structure, and additional meta-data	Nodes (*holons*), which are typed, with an explicit structure ("holoform"), and additional meta-data
Entries can link to other entries (within a	Nodes can link to other nodes (within a holoweb *and*

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1   https://github.com/holochain/holochain-proto/blob/whitepaper/holochain.pdf, https://developer.holochain.org/docs
2   As defined on Wikipedia (https://en.wikipedia.org/wiki/Blockchain); *note:* the Holochain white-paper uses the term "hash-chains" rather than blockchains[2] (inconsistent with https://en.wikipedia.org/wiki/Hash_chain)

| Holochain application) | between holowebs) |