

Certificate of Blockchain Proof

lightpaper.pdf

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This certificate constitutes proof that a document has been anchored to the bitcoin blockchain, thereby proving that the document existed in its current form on the date at which the blockchain entry was created.

You can use this proof to attest that:

(a) the document has not been altered in any way.(b) the document existed in its current from on the specified date.





An online version of this proof can be found at: https://provendocs.com/proof/5c36b92b2a9cc836f9a50f1e



The document was uploaded by Michael Harrison (google user: mike@southbanksoftware.com) at 2019-01-10T03:16:59.152Z

Details of the document being proved

The document name when hashed was "lightpaper.pdf"

You can view a copy of this document at: https://provendocs.com/document/5c36b92b2a9cc836f9a50f1e (permissions may be required to view the document)

lightpaper.pdf

The cryptographic hash of the document is: 412bed9f5c9f086767617f56f8d7cdf269aac4cb8fbae569874b77495284575f

See Schedule 1 for details of the hashing algorithm employed.

Blockchain proof details

The document hash was included within the <u>Chainpoint</u> proof at https://a.chainpoint.org/calendar/2517935/data

See Schedule 2 for a detailed cryptographic proof.

The Chainpoint proof was anchored to the bitcoin blockchain at block <u>557871</u> in bitcoin transaction <u>668be3bd8b9129f7ea520896cfb584f2d8d5fb79dade2aa429d1db4bd2763c14</u> at UTC: at UTC: Thu Jan 10 2019 14:16:59 GMT+1100 (Australian Eastern Daylight Time)

Summary

The document lightpaper.pdf with hash value

 $\underline{412bed9f5c9f086767617f56f8d7cdf269aac4cb8fbae569874b77495284575f} \ was \ anchored \ to \ the \ bitcoin \ blockchain$

by Michael Harrison (google user: mike@southbanksoftware.com) at UTC: 2019-01-10T03:16:59.152Z. Providing that the document

continues to hash to that value, you can be certain that the document existed in its current form on or before that date.



Schedule 1: Document hashing

The document hash of 412bed9f5c9f086767617f56f8d7cdf269aac4cb8fbae569874b77495284575f was obtained by performing a SHA-2 256 bit hash on the document at https://provendocs/documents/5c36b92b2a9cc836f9a50f1e (permission may be required to view this document). The hash was calculated on the document and its metadata as stored in the ProvenDocs system.

You can download a copy of the document and its metadata (permissions reuqired) at https://provendocs/documents/5c36b92b2a9cc836f9a50f1e/download. You can independently validate the hash by using the

open source hash validation tool at https://provendocs.com/downloads/validateHash. You can also extract the document from its metadata using this tool.

Schedule 2: Chainpoint proof

Chainpoint is an open standard for linking data to the public blockchain. It aggregates multiple hash values into a single

hash value which is then placed on the blockchain. The following chainpoint proof proves that the hash value of <u>412bed9f5c9f086767617f56f8d7cdf269aac4cb8fbae569874b77495284575f</u> is associated with the chainpoint proof placed on the bitcoin blockchain in transaction 668be3bd8b9129f7ea520896cfb584f2d8d5fb79dade2aa429d1db4bd2763c14

This proof can be downloaded from https://provendocs.com/proofs/undefined

Below is a binary representation of the chainproof

eJyUlz2P30lSx+G9EKGbdVV1PXRNZImEgJDoklE9NbY0eCx7Do5wuYR0CQiRjlvY44SQkBAh780IF4N+tte36zGC6/Df//786rm//Tf/8SLevrh7+7P885ePj9N39fBm7uLx3wnQbwBvEP4U1i3aLcBPf51v4lW9mLd/+9f/eB859//6uvOuH+ruw8avHl6//buvf3n/7nlT7UmpahsK7J50nhhe06x706melu2zs0colFXaeKS4Aufrf3h4/d3bF3FDol//8s275zJJvXwdhZEu4FiZyxPIXXeXTRzpxYykHkmgtg/u3sl9mfFj4P27570FjsOshU1CTq3ua8xPe08SX0axCcx0B056o2Y0H9qE0

- + CHwF9cjv/9hf3Jq4eeu5d9u5CO6IEb5K03iOM3ybluANeGs8tQn9j0k/exf3+40n982GnhDeCUp8K19yRCeKLB6NAq1ug9grJz
- +eqUsHZeMwCFImufKsPoqmA5Qcub5AlwdBeUÚLpIQe5jvnFTDIj7QGa1oR4ZtAHSdtzrQB3rFSrUT4Ári6PV
- +ZCtMFhrxapEM80CVTzioUsaX0T6kEjSGc+AtRfF5/FyEjTBdYvCBg5Efou3Lx4fX7+9ffYsvqoX8fLV64eXrx6/
- +rjjfPPhrz7OrAbx//6vX8quL+nz+A7l72dx/3P3XdNx+77t/yse4+/u23jfffv/eH790C39G7DFoP20np9thcKwUWMR4gY8vVEp04tC027yQz0iuBTzrFe iSq16wiTlLKUTbaiBtYj2iUIqodhz7qwVDLuGBMbJmuJ8AzFN2sMYa4REKJeyxOFM4sn2CCw2HUCwaFRZemucJ2naQnwOakUNKKZBqkrD6LG3 2zrLRJgrPgcJ0flSU0ElkHeY76cDyp1KTZ02sPbg8TG2ciDwhJ9cLAdiHfclpEQzBmlpruMWmqrHliYRlwai04mBydvXVF
- +zSpZA6ARSy1MwyjB04ctdCmPSsTiJ/2khinL2Yjssaz4ZzRkmNHhAy2xZFzuYGpC4x04UG2PUsKRr/
- Q7bnGdFYbbjHV4WRBzNObyFl08ynfp32jufZppRknSoT+fGLf/9fv/zEgfFi4TpegD5PpNRolYsvZ7XqCRmqLGRcpnVWL087udFRtXKzB+D1Jg20B MxAB9cBeYgfXyRyCZvTs1Ewl40VyUqN1iwOHWPGAx3CPu3PlxTByPme3tgao7pLc5wzmTGbBxUxaDU2DKit8+BpJkjB7SQYglSxSlwroVXDsbNg U0kd1DMmGd/0ke87ZmuP0i3K7FW9xpRP7fFxA8Nki0iC40vMnJ2ev9SmkgG4ajuwHD8PaWyxnuhdXSYYf0igLggJuQd876vuzV6p+8zFVNz +nD9fhqWEhhDyTe3l3E+2QshGuVj4ZMD5EawnJYth0ltP1EUjHJ8yrRl0TBwGmlsJ0zLhleoZimFbP6KKBbrHaq2hWmaxD0lcx65eYaniaEcW2rNZ BK5UdqGTAVGtLHQmmSb5GhSjj4CjzrsNLnvp
- +Tcy9zQ3ZPYltN0+gZGmQph9UL00bPowQZzhpYDujYkdnq30pnhknusSoEvfB6x5LjKKyzak1pNDJZ4WMe4ADIESZR3iVW3/R9wnkXp62pT0ncAUbEyxcYH5wu+WRbBZmTPlpJu0BcpzT9CU7ZQ1tmYFA7N0Hi9fxTtrbaHUca3ACWoizr7JaqdLcpywqVn3JTmHMPrNPUrRsKLW8xkalkh4247NtLyyDxGUos0dRllyp3PTUzjfvnldKcJyiUYDqkaWlNByxpoTXbnUy47XCwmMDrFixi9WRQ0ZLzCGzNZbl6sc0mjVY5rFrBo+EkFbrsVDZTD4ndVcsKPaiPueLNT9mly/HZ2PvS6lmnpOrKun9ZBE8x3rn1MLYddDggG+1auonzB/oivcKIR/rtwrhn0RsG/5uis0XPOt4jl9aouL
- +x1ri18/r4dXj/PzxP7/n/eV62R84n7DP/mK9t+c3f/Tpp28vGfPuOSPltB8pP7DV1BTtksK7rfpc6jyKK/fJGFHfxmnGLrT5uhv/5f175GXfXUr63R/8f3T050+Y9xr86RNGb8V/+gl/ae0L/38r7f8JAAD//+NKIhl=



Schedule 3: List of printable links in the document

Document being proven:

https://provendocs.com/document/5c36b92b2a9cc836f9a50f1e

Chainpoint.org:

https://chainpoint.org

Chainpoint proof for the document:

https://provendocs/proofs/5c36b92b2a9cc836f9a50f1e

Chainpoint calendar entry for the proven document:

https://a.chainpoint.org/calendar/2517935/data

Bitcoin block containing the proof:

https://live.blockcypher.com/btc/block/557871

Blockchain transaction:

https://live.blockcypher.com/btc/tx/668be3bd8b9129f7ea520896cfb584f2d8d5fb79dade2aa429d1db4bd2763c14

lightpaper.pdf

Open source validation tool:

http://provendocs.com/downloads/validateHash