

# Proposal for addition of bitcoin sign

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## Abstract

The bitcoin sign ₿ is well known and often used in running text, but it is not in Unicode. Adding this sign would be useful for research papers, websites, forums and other publications. There is substantial demand for ₿ to be added to Unicode, the user community supports adding the sign to Unicode and its addition would fill a significant gap in Unicode's currency symbols. This proposal has the support of the Bitcoin Foundation as well as other Bitcoin organizations, companies and developers.

## Introduction

Bitcoin is a popular open-source payment system and the bitcoin sign ₿ is used to represent the underlying currency in running text and images. [1] The bitcoin sign ₿ is well known to the public, appearing in books, magazines, signage, websites, online forums, software and research papers. Unfortunately the bitcoin sign does not appear in Unicode.

This proposal is for a Unicode code point for the bitcoin sign to be added to Unicode. This would make it much easier to use the bitcoin sign in text and would fill the substantial demand for this character.

## Examples of the bitcoin sign in running text

This section gives examples of the use of the bitcoin sign in running text from a variety of sources, printed and web-based.

A screenshot of a Wikipedia page on Bitcoin. The text reads: "As of 2014, symbols used to represent bitcoin are BTC,<sup>[note 2]</sup> XBT,<sup>[note 3]</sup> and ₿.<sup>[note 4]</sup><sup>[36]:1</sup>" The bitcoin sign ₿ is used in the text. The text is enclosed in a light gray box.

As of 2014, symbols used to represent bitcoin are BTC,<sup>[note 2]</sup> XBT,<sup>[note 3]</sup> and ₿.<sup>[note 4]</sup><sup>[36]:1</sup>

Figure 1. Wikipedia page on Bitcoin showing bitcoin sign in running text. [2]

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1 Standard practice is to use capitalized “Bitcoin” when referring to the protocol, software and community, and lowercase “bitcoin” when referring to the currency.

[https://en.bitcoin.it/wiki/Help:Introduction#Capitalization\\_.2F\\_Nomenclature](https://en.bitcoin.it/wiki/Help:Introduction#Capitalization_.2F_Nomenclature)

2 Wikipedia page on Bitcoin: <https://en.wikipedia.org/wiki/Bitcoin#Units>

изобразяване на биткойните, са BTC<sup>[25]</sup>, XBT<sup>[26]</sup> и ₿<sup>[25]</sup>, като водещите кандидати са BTC и XBT<sup>[27]</sup>.

Figure 2. Wikipedia page on Bitcoin in Bulgarian showing bitcoin sign in running text. [3]

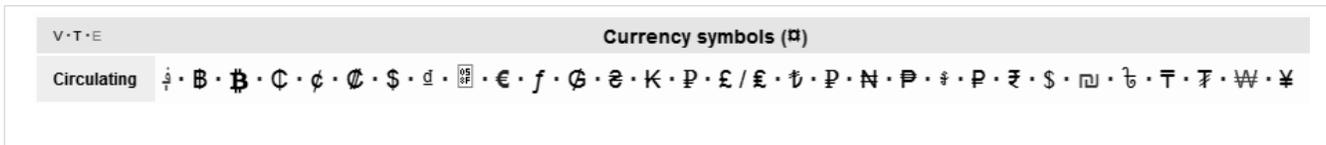


Figure 3. Wikipedia currency page. Currency symbols are all represented in Unicode, except for the bitcoin sign, which is an image. Using an image is unfortunate because it does not render like other symbols, e.g. scaling and link color. [4]

user-specified transaction fee (typically .0005 ₿, but as low

Figure 4. Bitcoin sign used as currency symbol in running text in a conference paper. [5, p1]

it is small but growing; look for  
the telltale ₿ symbol at the  
cash register. And

Figure 5. A print article in Wired magazine in 2011 used the bitcoin sign in text. [6]

LOCK Alice holds 1 ₿ (which occurs only if Alice is honest, but not in general).

Figure 6. Bitcoin sign used in running text. [7, p13]

convention,  $10^8$  satoshis is considered the primary unit of  
currency, called one “bitcoin”<sup>4</sup> and denoted XBT, BTC or ₿.

Figure 7. Bitcoin sign in running text in a conference paper. [8, p3]

3 Bulgarian Wikipedia page on Bitcoin: <https://bg.wikipedia.org/wiki/%D0%91%D0%B8%D1%82%D0%BA%D0%BE%D0%B9%D0%BD>

4 Wikipedia: Euro sign, currency symbols: [https://en.wikipedia.org/wiki/Euro\\_sign](https://en.wikipedia.org/wiki/Euro_sign)

5 Bitcoin and the age of bespoke silicon, M. B. Taylor, [CASES '13](https://arxiv.org/pdf/1405.1861.pdf) Proceedings of the 2013 International Conference on Compilers, Architectures and Synthesis for Embedded Systems. [http://cseweb.ucsd.edu/~mbtaylor/papers/bitcoin\\_taylor\\_cases\\_2013.pdf](http://cseweb.ucsd.edu/~mbtaylor/papers/bitcoin_taylor_cases_2013.pdf)

6 The rise and fall of Bitcoin, B. Wallace, Wired, 11 Nov 2011. [http://www.wired.com/2011/11/mf\\_bitcoin/](http://www.wired.com/2011/11/mf_bitcoin/)

7 Modeling Bitcoin Contracts by Timed Automata, M. Andrychowicz et al, FORMATS 2014, Formal Modeling and Analysis of Timed Systems. <http://arxiv.org/pdf/1405.1861.pdf>

8 Research Perspectives and Challenges for Bitcoin and Cryptocurrencies, Joseph Bonneau et al. 2015 IEEE Symposium on Security and Privacy. <https://courses.csail.mit.edu/6.857/2015/files/BMCNKF15-IEEEESP-bitcoin.pdf>

- NZ Shipping (Courier Post) - 0.014 for up to 2, 0.017 $\text{₿}$  for up to 6, 0.02 $\text{₿}$  for up to 10, 0.024 $\text{₿}$  for up to 30, 0.02 $\text{₿}$ 7 for up to 53 (\$1500 shipping insurance limit)
- Australian Shipping ("International Economy Courier 2-6 days") - 0.05 $\text{₿}$  for up to 10, additional 0.01 0.012 $\text{₿}$  for an extra 10 (rounded up), limit of 30 per shipment (Australian GST free limit)
- Australian Shipping ("International Express Courier 1-5 days") - 0.09 $\text{₿}$  for up to 20, additional 0.015 0.02 $\text{₿}$  for an extra 10 (rounded up), limit of 30 per shipment (Australian GST free limit)
- Other Destinations estimate - Express courier 0.17 $\text{₿}$  for first 20, 0.025 $\text{₿}$  for each extra 10
- Other Destinations estimate - Economy courier 0.084 $\text{₿}$  for first 10, 0.02 $\text{₿}$  for each extra 10

Figure 8. This text shows extensive use of the bitcoin sign as a currency symbol. [9]

даваться 7,25 $\text{₿}$ , а насчет комиссий это еще вилами на воде...
过来看看账号行情。出乎意料，HERO要3.5 $\text{₿}$ 。顺便说明一下，这个账号不卖。
Gândește-te și oferă și tu ce ai/ce știi în $\text{₿}$ !
Einen meiner Trezor habe ich schon an jemanden für 0.31 $\text{₿}$ zzgl Versand verkauft.
Pessoalmente acho q não, pois o preço do batch #3 será $\text{₿}75$ e a entrega será em Maio,
bih povukao sve investicije imao bih ravno 4 $\text{₿}$
El precio es de $\text{₿}0.2$ , algo negociable. Podemos usar escrow.
έδωσα 100 € και πήρα 0,46649 $\text{₿}$ , δηλ. ισοτιμία 214 έναντι 204 €/ $\text{₿}$ διεθνώς.
saya kasih agan reward 0.015 $\text{₿}$

Figure 9. Nine bitcointalk.org forum posts illustrate the use of the bitcoin sign in running text in multiple languages: Russian [10], Chinese [11], Romanian [12], German [13], Portuguese [14], Croatian [15], Spanish [16], Greek [17] and Indonesian [18]. This forum has tens of thousands of uses of the bitcoin sign in running text.

broadcasts *Fuse*<sup>A</sup> or *CS*<sup>A</sup>.*Fuse* to get extra  $d\text{₿}$  (in addition to  $2d\text{₿}$  already claimed from *Open*<sup>B</sup> and *CS*<sup>B</sup>.*Open*).

Figure 10. Bitcoin sign in a research paper. [19, p6]

- 9 <https://bitcointalk.org/index.php?topic=501732.msg5522855#msg5522855>
- 10 <https://bitcointalk.org/index.php?topic=294360.msg3190781#msg3190781>
- 11 <https://bitcointalk.org/index.php?topic=821527.msg9864149#msg9864149>
- 12 <https://bitcointalk.org/index.php?topic=597578.msg6835965#msg6835965>
- 13 <https://bitcointalk.org/index.php?topic=500242.msg5512837#msg5512837>
- 14 <https://bitcointalk.org/index.php?topic=164160.msg1717809#msg1717809>
- 15 <https://bitcointalk.org/index.php?topic=901589.msg9925266#msg9925266>
- 16 <https://bitcointalk.org/index.php?topic=988218.msg10765629#msg10765629>
- 17 <https://bitcointalk.org/index.php?topic=1158623.msg12207105#msg12207105>
- 18 <https://bitcointalk.org/index.php?topic=1171268.msg12332893#msg12332893>
- 19 How to deal with malleability of BitCoin transactions M. Andrychowicz et al, 2013.

$$\mathfrak{F}_x = \sum_i^N \mathfrak{B}_i^{in} - \sum_i^M \mathfrak{B}_i^{out} \geq 0$$

scambio valute *fiat* con  $\mathfrak{B}$

Figure 11. Two examples of the bitcoin sign in an Italian presentation. The first example is notable for using the symbol in a mathematical context. [20, p20, 31]

dollar price of bitcoins ( $\$/\mathfrak{B}$ ) divided by the Euro price of bitcoins ( $\€/ \mathfrak{B}$ ) implies a dollar-euro

Figure 12. Bitcoin sign used in ratios in running text. [21, p6]

reward (currently  $\mathfrak{B}25$ ) to whoever first

$X \leftarrow x$  is the message “put  $\mathfrak{B}x$  in  $X$ ”. This is an output.

Figure 13. Bitcoin sign used in running text and as a mathematical symbol. [22, p1,3]

its revenue density by merely 0.6%, amounting to  $\mathfrak{B}0.86$  a day or 18 USD.

Figure 14. Another research paper with the bitcoin sign in running text. [23, p9]

can contain instructions of a form “Alice sends  $d \mathfrak{B}$  to Bob” or “Bob sends  $d \mathfrak{B}$

Figure 15. Conference article showing bitcoin sign in running text. [24, page 3]

<http://arxiv.org/pdf/1312.3230.pdf>

20 Introduzione a Bitcoin, P.Bertoni, Network Security – AA 2014/2015.

<http://www.ing.unibs.it/~gringoli/teaching/netsec/docs/2014-netsec-seminar.pdf>

21 Smith, Jacob B., An Analysis of Bitcoin Exchange Rates (January 20, 2015). Available at SSRN:<http://ssrn.com/abstract=2493797>

22 Increasing Anonymity in Bitcoin, Amitabh Saxena et al. Financial Cryptography and Data Security: FC 2014 Workshops. [http://fc14.ifca.ai/bitcoin/papers/bitcoin14\\_submission\\_19.pdf](http://fc14.ifca.ai/bitcoin/papers/bitcoin14_submission_19.pdf)

23 Bitcoin - The Miner's Dilemma, Ittay Eyal. Swift Institute Working Paper no. 2014-006. [http://www.cs.cornell.edu/projects/quicksilver/public\\_pdfs/minerDilemma2.pdf](http://www.cs.cornell.edu/projects/quicksilver/public_pdfs/minerDilemma2.pdf)

24 Fair Two-Party Computations via Bitcoin Deposits: Financial Cryptography and Data Security, <https://eprint.iacr.org/2013/837.pdf>

By far the most commonly used symbol for Bitcoin is ₿, a capital letter B with two vertical lines "going through" it, though the lines are only visible at the top and bottom.

These transactions were ₿50 each.

Figure 16. Pages on Bitcoin Wiki describe the symbol and use it in running text. [25]

Our support is available 24/7 on skype and you pay \$1 per<sup>3</sup> in ₿.

Figure 17. Running text usage on a website. [26]

XBT is commonly used. The currency symbol is ₿.

Figure 18. Symbol usage on a currency exchange website. [27]

Generally, a major heist, theft, hack, scam, or loss must cause damage greater than or equal to 500 ₿, in ₿ damage only, to qualify for inclusion in this list. Thefts related to Bitcoin but with most damage in another currency do not qualify, unless customers were damaged in ₿. Borderline thefts may qualify if reasonable estimates are over or equal to 500 ₿.

Figure 19. Part of a forum article that uses the symbol extensively. [28]

described. The Bitcoin currency symbol is ₿, and the currency code is BTC (also XBT). A satoshi

Figure 20. A journal article using the bitcoin sign in running text. [29]

You can use a literal amount like ₿0.0001 or 0.0001 BTC.

Figure 21. The changetip.com website uses the bitcoin sign as a currency symbol. [30]

Live exchange rate  
€ 100 ⇌ ₿ 0,47915668

Figure 22. The Bitonic website uses the bitcoin sign as a currency symbol. [31]

25 Bitcoin Wiki: [https://en.bitcoin.it/wiki/Bitcoin\\_symbol](https://en.bitcoin.it/wiki/Bitcoin_symbol) and [https://en.bitcoin.it/wiki/Controlled\\_supply](https://en.bitcoin.it/wiki/Controlled_supply)

26 Rupy Cloud: <http://host.rupy.se>

27 xe: <http://www.xe.com/currency/xbt-bitcoin>

28 <https://bitcointalk.org/index.php?topic=576337>

29 eCash in a Social Theory of Money: Bitcoin and Other Cryptocurrencies, Frederik S. The, Monetary Economics eJournal 6 (156), 2014. [http://www.decentralgroup.com/archive\\_files/SSRN-id2491743.pdf](http://www.decentralgroup.com/archive_files/SSRN-id2491743.pdf)

30 ChangeTip.com: <https://www.changetip.com/tip-amounts>

31 Bitonic BitMerchant page. <https://bitonic.nl/en/merchant>

0.13009225 ₿/g

Figure 23. The Vaultoro website uses the bitcoin sign in the unusual form bitcoins per gram. [32]

m₿ 149.58<sub>278</sub> ~ \$ 35.87

Figure 24. The MultiBit HD software uses the bitcoin sign as a currency symbol in the form “milli-bitcoins”. [33]

m₿ 4791.6503

m₿ 7.12

0.2₿

AMOUNT: ₿

Figure 25. Mobile apps use the bitcoin sign as a currency symbol: GreenBits [34], Bitcoin Wallet [35], Zebpay [36] and BitPak [37]. The first two examples use milli-bitcoins as the currency unit.

To summarize, the bitcoin sign is extensively used in running text. Examples include online forums, conference papers, books, websites, print magazines and software. It is used in numerous languages, not just English.

32 Vaultoro: <http://vaultoro.com>. Screenshot: <https://i.imgur.com/reQC1az.png>

33 MultiBit HD Bitcoin wallet software runs on Windows, Mac, and Linux. <https://multibit.org/>

34 GreenBits Bitcoin Wallet: [https://play.google.com/store/apps/details?id=com.greenaddress.greenbits\\_android\\_wallet](https://play.google.com/store/apps/details?id=com.greenaddress.greenbits_android_wallet)

35 Bitcoin Wallet: <https://play.google.com/store/apps/details?id=de.schildbach.wallet>

36 Announcing ‘Zebpay App’- The first bitcoin mobile wallet app in India: <http://www.dnaindia.com/scitech/report-announcing-zebpay-app-the-first-bitcoin-mobile-wallet-app-in-india-2067943>

37 Apple Removes Coinbase From App Store Less Than a Month After Launch: <http://www.coindesk.com/coinbase-bitcoin-app-apple-app-store/>

# Drawing the glyph

The bitcoin sign glyph is most commonly drawn as shown:



It is described as “a capital letter **B** with two vertical lines 'going through' it, though the lines are only visible at the top and bottom.” [38]

There are variants of the bitcoin sign glyph with different serifs, no serifs, different line weights, or the verticals slightly moved. These can all be handled as variations in different fonts.

The public-domain [BTC.ttf](#) font contains the bitcoin sign. This font is used in this proposal and can be used as the reference for the bitcoin sign. An open-source web font with the bitcoin sign ([fa-btc](#) by Font Awesome) is also available. The bitcoin sign is one of the currency [glyphs](#) provided with the popular Bootstrap web framework.

## User community demand for the symbol

The Bitcoin user community strongly supports the addition of the bitcoin sign to Unicode. A discussion about adding the bitcoin sign on the Reddit Bitcoin group (which has over 172,000 readers) was highly favorable. [39] The current proposal was also discussed on the popular digital currency forum [bitcointalk.org](#) and the Bitcoin developer forum [bitcoin-dev](#) which were supportive.

The bitcointalk.org forum illustrates the popularity of the bitcoin sign in running text: there are over 120,000 text postings in this forum that use the bitcoin sign. [40] This website uses a custom font and special coding that allows users to easily insert the bitcoin sign into text. If the bitcoin sign were added to Unicode, it would be available to users on any forum, not just ones with specialized software.

Reddit moderators attempted to add bitcoin sign support to the Bitcoin forum due to demand for this feature, but were unsuccessful for technical reasons. [41] Unicode support would make this straightforward.

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38 bitcoin wiki: Bitcoin Symbol. [https://en.bitcoin.it/wiki/Bitcoin\\_symbol](https://en.bitcoin.it/wiki/Bitcoin_symbol)

39 The article “Help me get the Bitcoin symbol added to Unicode” received 674 upvotes, and was 93% upvoted. “Proposal to add the Bitcoin symbol to Unicode” received 399 upvotes, 94% upvoted.  
[https://www.reddit.com/r/Bitcoin/comments/3j0261/help\\_me\\_get\\_the\\_bitcoin\\_symbol\\_added\\_to\\_unicode/](https://www.reddit.com/r/Bitcoin/comments/3j0261/help_me_get_the_bitcoin_symbol_added_to_unicode/)  
[https://www.reddit.com/r/Bitcoin/comments/3jmg9h/proposal\\_to\\_add\\_the\\_bitcoin\\_symbol\\_to\\_unicode\\_pdf/](https://www.reddit.com/r/Bitcoin/comments/3jmg9h/proposal_to_add_the_bitcoin_symbol_to_unicode_pdf/)

40 A database query by bitcointalk.org administrator *theymos* returned 120,842 messages containing the Bitcoin sign, as of 30 Aug 2015.

41 Proposal for adding Bitcoin symbol in this subreddit:  
[https://www.reddit.com/r/Bitcoin/comments/3j385n/proposal\\_for\\_adding\\_bitcoin\\_symbol\\_in\\_this/](https://www.reddit.com/r/Bitcoin/comments/3j385n/proposal_for_adding_bitcoin_symbol_in_this/)

In 2014, the Bitcoin Foundation looked into standardizing a Unicode symbol for Bitcoin. [42] The Bitcoin Foundation supports the current proposal.

Users of the LaTeX document preparation system have asked in several forums how to use a bitcoin sign in LaTeX [43]; this problem would go away if the symbol were in Unicode.

## User community support

The Bitcoin user community strongly supports the addition of the bitcoin sign to Unicode. Discussions about adding the bitcoin sign on the Reddit Bitcoin group (which has over 172,000 readers) were highly favorable. [44] The current proposal was also discussed on the popular digital currency forum [bitcointalk.org](http://bitcointalk.org) and the Bitcoin developer forum [bitcoin-dev](http://bitcoin-dev) which were supportive.

This proposal is supported by the [Bitcoin Foundation](http://Bitcoin Foundation), the leading nonprofit organization for the Bitcoin community. Other supporters of this proposal include [21](#) (Bitcoin startup), [Bitcoin Solutions Ltd](#), Andreas Schildbach ([Bitcoin Wallet](#) author), [Digitalcoin Foundation](#), [BitNewsFlash](#), Eric Martindale (former Open Source Strategist at Bitpay), [Bitcoin Wales](#), Justin Drake (founder of [Cambridge Bitcoin](#)), theymos (head administrator of [bitcoin.org](http://bitcoin.org) and [/r/bitcoin](http://r/bitcoin)), Theo Chino (Bitcoin developer) and Peter Todd (Bitcoin Core developer).

## Properties

The proposed properties for the bitcoin sign are:

20BF;BITCOIN SIGN;Sc;0;ET;;;;N;;;;

**Name:** The name BITCOIN SIGN is suggested. The name parallels EURO SIGN, PESO SIGN, RUBLE SIGN, etc. This name follows the Designation/Qualifier structure of ISO/IEC 10646:2014 Annex L Guideline 4.

**Range:** Currency Symbols (20A0–20CF), with proposed code point 20BF – the next available code point in the range. The bitcoin sign is suitable for the Basic Monolingual Plane (BMP); it is high utility due to the size of the community and their heavy use of the symbol. A code point in the Supplemental Multilingual Plane (SMP) is not recommended because the bitcoin sign will be used by a variety of mobile devices and apps, with variable levels of support for SMP characters.

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42 <http://www.coindesk.com/bitcoin-foundation-standardise-bitcoin-symbol-code-next-year/>

43 Bitcoin symbol in LaTeX. <http://tex.stackexchange.com/questions/112161/bitcoin-symbol-in-latex>  
Latex support for bitcoin? <https://bitcointalk.org/index.php?topic=96438.0>

Bitcoin logo in LaTeX? <http://bitcoin.stackexchange.com/questions/30562/bitcoin-logo-in-latex>

comp.text.tex > Bitcoin symbol. <https://groups.google.com/forum/#!topic/comp.text.tex/aaDphoWpbwQ>

44 The article “Help me get the Bitcoin symbol added to Unicode” received 674 upvotes, and was 93% upvoted. “Proposal to add the Bitcoin symbol to Unicode” received 399 upvotes, 94% upvoted.

[https://www.reddit.com/r/Bitcoin/comments/3j0261/help\\_me\\_get\\_the\\_bitcoin\\_symbol\\_added\\_to\\_unicode/](https://www.reddit.com/r/Bitcoin/comments/3j0261/help_me_get_the_bitcoin_symbol_added_to_unicode/)

[https://www.reddit.com/r/Bitcoin/comments/3jmg9h/proposal\\_to\\_add\\_the\\_bitcoin\\_symbol\\_to\\_unicode\\_pdf/](https://www.reddit.com/r/Bitcoin/comments/3jmg9h/proposal_to_add_the_bitcoin_symbol_to_unicode_pdf/)

**Collation:** The bitcoin sign is not part of an existing collating sequence and does not require a particular collation order.

Property	Suggested Value
Code point	20BF
Name	BITCOIN SIGN
General Category	Sc
Canonical Combining Class	0
Bidirectional Class	ET
Decomposition Type / Decomposition Mapping	
Numeric Type	
Numeric Value	
Bidi Mirrored	N
Unicode 1 Name	
ISO Comment	
Simple Uppercase Mapping	
Simple Lowercase Mapping	
Simple Titlecase Mapping	

Table 1: Suggested character properties for bitcoin sign.

The bitcoin sign is uncased and has no special line-breaking behavior. The character is not meant for use in identifiers. It is a standalone symbol. It is not a white-space character and has no numeric value. It is not a combining character or punctuation.

## Potential issues

### Can an existing Unicode symbol be used?

The [Bitcoin Wiki](#) says that “By far the most commonly used symbol for Bitcoin is **₿**” and it discusses various alternatives. One possibility is LATIN CAPITAL LETTER B + COMBINING DOUBLE VERTICAL STROKE OVERLAY. This has several problems. Semantically, the bitcoin sign is not a B combined with vertical strokes, but a unique character unrelated to B. Visually, the bitcoin sign is very different from a B with vertical strokes, since the bitcoin sign only has strokes at the top and bottom. Finally, depending on the browser and font, rendering of the combined B ranges from unreadable to ugly.



Figure 26. “B combined with double vertical stroke overlay” as rendered in current versions of Windows Chrome, Android, Internet Explorer, Firefox, Linux Chrome, and Mac Safari.

Another alternative is **฿** THAI CURRENCY SYMBOL BAHT. Unlike single-bar and double-bar dollar signs. [45], the bitcoin sign and baht symbol are not variants of one symbol. The bitcoin sign and baht symbol are two historically unrelated symbols. The bitcoin sign uses two bars, while the Baht symbol uses one. The bar is visible through the Baht symbol while the bars are not visible through the bitcoin sign. Since one glyph will not be satisfactory for the bitcoin sign and baht symbol, these are not candidates for unification. [46]

Some websites use the baht symbol to represent bitcoins due to the lack of the bitcoin sign in Unicode. However, this is considered by some to be “hijacking” and “stealing” the baht symbol. [47][48] While the same symbol can be used for two currencies (e.g. \$ for US dollars and Mexican pesos), there is no reason to reuse the baht symbol for bitcoin except the lack of the bitcoin sign in Unicode.

Another alternative is **ℬ** LATIN CAPITAL LETTER B WITH STROKE. This is supported by some people because it is an existing Unicode character. [49] However, it does not resemble the bitcoin sign, so it would require a major effort to switch to it.

These alternatives are workarounds due to the lack of the real bitcoin sign in Unicode. If the bitcoin sign were in Unicode, these alternatives would not be used.

## Is the bitcoin sign a commercial logo?

To quote from bitcoin.org: “Bitcoin is open-source; its design is public, nobody owns or controls Bitcoin.” The bitcoin sign was originally part of an icon created for the Bitcoin client software in 2010 by Bitcoin inventor “Satoshi Nakamoto” and placed into the public domain. [50] The bitcoin sign was

45 Relevant discussion in Unicode Standard Version 8.0 – Core Specification, 22.1 Currency Symbols.

<http://www.unicode.org/versions/Unicode8.0.0/ch22.pdf>

46 Use of the baht symbol for Bitcoin was discussed on the unicode.org mailing list in the thread “Upcoming proposal for Bitcoin sign”. That thread should be referenced for more information on why the two symbols should not be unified. <http://unicode.org/pipermail/unicode/2015-September/002683.html>

47 Some Bitcoin enthusiasts want to hijack the symbol for Thailand’s currency, Tech in Asia. <https://www.techinasia.com/bitcoin-enthusiasts-steal-symbol-thailands-currency/>

48 To ฿ or not to ฿: Bitcoin debates stealing Thai baht's identity. <http://bangkok.coconuts.co/2014/04/22/bh-or-not-b-bitcoin-movement-debates-stealing-thai-bahts-identity>

49 See “B is for Bitcoin”: <http://bitcoinsymbol.org/> and “To B or not to B”: <https://medium.com/down-the-hashrabbit-hole/to-or-not-to-4e952961f41>

50 Announcement of icon, 24 Feb 2010: <https://bitcointalk.org/index.php?topic=64.0>

Icon with public domain license: <https://en.wikipedia.org/wiki/File:Bitcoin.png#filehistory>

Icon was placed in source code (replacing the “BC” icon) 20 Jun 2010:

later extracted from the icon for use in text, and the resulting font was also placed in the public domain. The bitcoin sign is a common component of Bitcoin logos, but the symbol itself is a text character, not a logo.

## Previous bitcoin sign proposal

The bitcoin sign was previously proposed for addition to Unicode in [L2/11-130](#) and [rejected](#). The first issue was the use of the bitcoin sign in running text had not been demonstrated. The current proposal demonstrates many uses in running text. The other issue that was raised was the possibility of IP issues because the community website bitcoin.org is using the symbol in their logo. According to bitcoin.org, the logo is in the public domain. [51] Also note that this proposal discusses the symbol, not the logo.

## Will Unicode be flooded with symbols for many crypto-currencies?

Most other crypto-currencies have learned from the difficulty that a non-Unicode symbol causes for Bitcoin, and use a symbol already in Unicode. For instance, Dogecoin uses  $\text{Ð}$ , Ethereum uses  $\text{Ξ}$ , Litecoin uses  $\text{Ł}$ , Namecoin uses  $\text{ℵ}$ , Peercoin uses  $\text{ℙ}$  and Primecoin uses  $\text{Ψ}$ . Some, like Ripple, use Roman capital letters (XRP), mimicking ISO 4217 currency codes.

While it is possible another crypto-currency will have a non-Unicode symbol that is extensively used in text, this is unlikely.

## Is Bitcoin just a transient fad?

Bitcoin was created in 2008 and its use has grown exponentially since. CBS reported 1.3 million Bitcoin users in 2014. [52] It seems unlikely that Bitcoin will suddenly disappear. If it does, the bitcoin sign will still be useful for historical writing and research papers about currencies.

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<https://en.wikipedia.org/wiki/File:Bitcoin.png#filehistory>

51 Logo was created by bitboy and placed in public domain: <https://bitcointalk.org/?topic=1756.0>

52 Report: Nearly 5 million Bitcoin users by 2019, CBS Moneywatch, March 17, 2015.  
<http://www.cbsnews.com/news/report-nearly-5-million-bitcoin-users-by-2019/>

# Conclusion

Looking at the Unicode [Criteria for Encoding Symbols](#), the bitcoin sign ₿ is a good fit for addition to Unicode. It occurs in running text. It has a well defined user community. Being able to search for it in text would be useful. It has well-defined semantics that make it appropriate for computer processing. It is needed to complete the class of currency symbols already in the standard. [53] Finally, it is letter-like in the sense that it should match the surrounding font style.

The bitcoin sign is used extensively in running text in online forums, research papers, websites and other publications. There is a strong demand for this character and the lack of Unicode support requires inconvenient workarounds. Providing the bitcoin sign in Unicode would be highly beneficial.

Acknowledgments: Many people provided helpful comments including Garry Clawson, Mark Davis, Justin Drake, Martin Dürst, Asmus Freytag, jstolfi, luke-jr, molo1134, NLNico, QuasiSteve, runpaint, Marcel Schneider, theymos, Danny Thorpe and Richard Wordingham.

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53 All presently-circulating currency symbols (as defined by Wikipedia) are represented in Unicode with the exception of the Bitcoin sign and the Pridnestrovie ruble.

[https://en.wikipedia.org/wiki/Currency\\_symbol#List\\_of\\_presently-circulating\\_currency\\_symbols](https://en.wikipedia.org/wiki/Currency_symbol#List_of_presently-circulating_currency_symbols)

**ISO/IEC JTC 1/SC 2/WG 2  
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS  
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646<sup>1</sup>**

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

**A. Administrative**

1. Title:	<b>Addition of bitcoin sign</b>
2. Requester's name:	<i>Ken Shirriff</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>individual</i>
4. Submission date:	<i>10/02/2015</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<input checked="" type="checkbox"/>
(or) More information will be provided later:	<input type="checkbox"/>

**B. Technical – General**

1. Choose one of the following:	
a. This proposal is for a new script (set of characters):	<input type="checkbox"/> No
Proposed name of script:	
b. The proposal is for addition of character(s) to an existing block:	<input checked="" type="checkbox"/> Yes
Name of the existing block:	<i>Currency Symbols</i>
2. Number of characters in proposal:	<input type="text" value="1"/>
3. Proposed category (select one from below - see section 2.2 of P&P document):	
A-Contemporary <input checked="" type="checkbox"/>	B.1-Specialized (small collection) <input type="checkbox"/>
B.2-Specialized (large collection) <input type="checkbox"/>	C-Major extinct <input type="checkbox"/>
D-Attested extinct <input type="checkbox"/>	E-Minor extinct <input type="checkbox"/>
F-Archaic Hieroglyphic or Ideographic <input type="checkbox"/>	G-Obscure or questionable usage symbols <input type="checkbox"/>
4. Is a repertoire including character names provided?	<input checked="" type="checkbox"/> Yes
a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?	<input checked="" type="checkbox"/> Yes
b. Are the character shapes attached in a legible form suitable for review?	<input checked="" type="checkbox"/> Yes
5. Fonts related:	
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<input type="text" value="See text"/>
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	<input type="text" value="public domain font"/>
6. References:	
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	<input checked="" type="checkbox"/> Yes
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<input checked="" type="checkbox"/> Yes
7. Special encoding issues:	
Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?	<input checked="" type="checkbox"/> Yes
	<i>see text</i>

**8. Additional Information:**

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database ( <http://www.unicode.org/reports/tr44/> ) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

<sup>1</sup> Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

### C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? If YES explain	<i>No</i>
	<i>L2/11-130 is an earlier proposal for the same character.</i>
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)? If YES, with whom? If YES, available relevant documents:	<i>Yes</i>
	<i>see text</i>
	<i>see text</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:	<i>Yes</i>
	<i>see text</i>
4. The context of use for the proposed characters (type of use; common or rare) Reference:	<i>common</i>
	<i>see text</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	<i>Yes</i>
	<i>see text</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference:	<i>Yes</i>
	<i>Yes</i>
	<i>see text</i>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	<i>n/a</i>
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference:	<i>No</i>
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If YES, reference:	<i>No</i>
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character? If YES, is a rationale for its inclusion provided? If YES, reference:	<i>No</i>
11. Does the proposal include use of combining characters and/or use of composite sequences? If YES, is a rationale for such use provided? If YES, reference: Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? If YES, reference:	<i>No</i>
	<i>n/a</i>
12. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary)	<i>No</i>
13. Does the proposal contain any Ideographic compatibility characters? If YES, are the equivalent corresponding unified ideographic characters identified? If YES, reference:	<i>No</i>