

Messaging via SEPA transfer comments

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Revision 1: mention contracts. Characters sets. ISO 20022

Abstract

The SEPA wire system offers a relatively fast way to transfer money between accounts within the European union.

It also allows a certain amount of data to attached as a comment.

This was my naïve attempt at conducting data transfer via a bank transfer.

Method and results

I first perused my bank's limits regarding the comment fields attached to SEPA transfers. Turns out most characters used by base64 were supported aside from the notable exception of "+" which I replaced by "-" (as per ISO 20022).

With this method I sent myself the following monochrome PNG of a well known celebrity:



This 2097 bytes long file took 20 SEPA transfers due to the constraints set by my bank on data payload in the comment fields (4x35 + 1x35)

14/08	Virement Pepe.Png 13 Mr [REDACTED] Zpetucdsfwicdnrmvcppoufa9kiunizrf/ Z-Hm6oaml-Lkw4tokrup/sxvhnc7e4jbqug Nen7zukh3jff31sldgk7mt8ghawatkcmev Sdswxunqwsakuxtefugrafkxuid5c70katq Pepe.Png 13	15,00
14/08	Virement Pepe.Png 12 [REDACTED] D8he78fm59xldzgc3h9z4hb/40rvdarw-O 20-Ovtlqqnsgp4spd5o/kr1dmxohx/4swvt Pwxixn4g64/lsph94n9td5o80ojkv5ct7e/ H2smh376th6fjlfzaujftfvwz22w-Od9jl Pepe.Png 12	15,00
14/08	Virement Pepe.Png 11 [REDACTED] Hw1zztznzc/iq8vt7kkcjpqfqkj7wf0h/bg lkkchxsvkcz6xpp2mrhqio4uyws5j74vpzn Zosufn11-1c9p6kpifojlj2cd2e9g1efb2v ldfxu9dxeqgp/72s0fdzor1/bf-Edrdroid Pepe.Png 11	15,00
14/08	Virement Pepe.Png 10 [REDACTED] Kz8g6-Ow2mqauzu5eeuyti/1cij3bdc9ry Gu-Hjtoljgw/iorlkg9o9y6qwf5dtgagkts Snlwjefygg-Sg-J7lfm-Wxjdfd7nqa5tnyc Jm89xkg50fc58kplo5qpdhajt4c6es969ey Pepe.Png 10	15,00
14/08	Virement Pepe.Png 9 [REDACTED] Belh0wablP86tna6tmhuzbgbyyx4eewjyt P3adlsrdgvfqw/h1fznbs0odrjj48qrxobv Arh40qzkknqzsn-/gwg8ewpc7fardk54p9s Uv26vu2j6/oiuxyx29dcqfgltgnvve7t16s Pepe.Png 9	15,00
14/08	Virement Pepe.Png 8 [REDACTED] 5dxb5kdrk4jhzurrxb/xycm02wuehai-l lfhxd2swb9otifun8maqo1av1fipkzgz9d2 Ezbcg8cvbmixg/udmakse56t5dkumcvqmfb Gksnqn9bzgergzkr0n2dmzs/fz1kyn6jbf8	15,00

This screenshot of a portion of the transaction demonstrates the constraints involved. (Please note: 15€ was the minimum amount in the case of this bank account, this may vary by bank and country and type of account)

Conclusion

SEPA transfers may represent a slow messaging and data storage solution. However, it presents with several uncertainties such as the allowed set characters as defined per ISO20022 and the recommendations for handling of latin characters, comment size, comment “sanitizing” and related losses, along with minimal transfer fees and amounts.

SEPA does represent a slow data transfer system if its issues could be ironed out and its limits more clearly defined. Also API-level access is likely a practical necessity in order to implement this for larger datasets, which is unlikely to happen in most financial institutions, at least, for access to the general public, due to potential security reasons.

It is worth remembering that several blockchain systems already exist in order to achieve the same (and can also carry out other operations such as, smart contracting); however none of them are as widely deployed to the general public.

“Contracts” and legally binding texts could possibly be embedded as well based on standards yet to be defined, as per my knowledge at this date.

Payloads could also include such items as references to other blockchains and the like.

Areas of development could involve messaging services, temporary storage for small amounts of data, and financial institutions could easily leverage this system, much like telecommunications companies leveraged the SMS system back in the adoptive days of GSM systems.

More research is warranted.

References

SEPA REQUIREMENTS FOR AN EXTENDED CHARACTER SET (UNICODE SUBSET) BEST PRACTICES -
<https://www.europeanpaymentscouncil.eu/sites/default/files/KB/files/EPC217-08%20Draft%20Best%20Practices%20SEPA%20Requirements%20for%20Character%20Set%20v1.1.pdf>