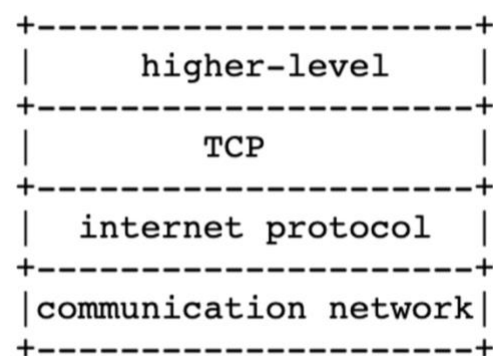


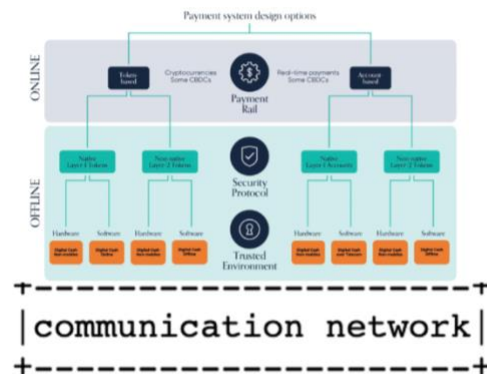
Crunchfish Digital Cash 2.0 – a paradigm shift in payments

Crunchfish have today released Digital Cash 2.0 to drive a paradigm shift in payments. The internet protocols fundamentally changed digital communications by their resilient design. Digital payments must also be upgraded to deliver the robust, inclusive and private service that should be required by any service of public good. Neither token-based nor account-based payment applications are able to deliver this unless they are supported by an underlying protocol designed to offer interoperability, scalability, and security. Crunchfish Digital Cash is that reliable end-to-end protocol and destined to become the standard protocol for digital payments as the internet protocols are for digital communications.

Protocol Layering



TCP / IP in digital communications



Crunchfish Digital Cash PIP in digital payments

Using the same design principles as the internet Crunchfish Digital Cash is a robust, inclusive and private Payments Internet Protocol that will become the baseline of all payment services. What the internet is for digital communication, Crunchfish Digital Cash will be for digital payments.

Digital payment is a public good alongside with the internet, telecom networks and electricity. However, it is not anywhere near to deliver on the same robustness as required by a service that is critical for society. Crunchfish believe that all payment services must be upgraded to deliver survivability in the face of any temporary failure. Payment services must come in many form factors to allow all people to be digitally and financially included and privacy must be preserved at the same integrity level as paying with cash.

Crunchfish Digital Cash delivers the solution that upgrades any higher-level payments application, whether token-based as cryptocurrencies or account-based as real-time payments systems, to the same resilient level as the internet protocols have done for digital communications. Neither token-based nor account-based payments systems as higher-level applications will be able to make the required upgrade unless they deploy the underlying Payments Internet Protocols (PIP) designed and patented by Crunchfish. Only then will the public get the robust, inclusive, private, interoperable, scalable and secure payments systems they require.

Financial regulators play a key role to drive this paradigm shift as they should demand that any payment service allowed to operate in the country must fulfil these fundamental features as a public good. Furthermore, any central bank should take it upon themselves to deliver on these design goals for their Central Bank Digital Currency (CBDC) implementations as it must deliver a significantly better payment service than what is currently available. This will also drive innovation and the necessary upgrade of digital payment services.

Crunchfish Digital Cash 2.0 is a refactoring of the previous 1.x version that will decrease customer integration efforts and further enhance the scalability of the solution. It has the [same design philosophy](#) as the [TCP / IP protocols](#) for digital communications, as [detailed in a previous press release](#). A new API has been designed, which will make it easier to add new functionality, such as [Digital Cash over telecom](#) which will be included in a 2.1 release later in Q1. New and enhanced security measures have been implemented to prevent fraud and double spending. Crunchfish Digital Cash 2.0 is issuer centric, as it adds increased configurability for issuers of payment services to create more flexibility in the implementation and roll-out of Digital Cash. It is also compliant with the industry standard ASN.1. Crunchfish Digital Cash 2.0 is now available for customer download through the Crunchfish developer portal.

"In parallel with supporting our ongoing customer projects, like the [Offline Retail Payments](#) pilot with HDFC Bank and RBI, we've been working hard to develop a next generation of Digital Cash. 2.0 makes it easier for issuers to integrate Digital Cash into their payment services as an underlying protocol. At the same time, we have increased the security and added more functionality. I am truly proud of what the development team has accomplished.", says Rutger Petersson, R&D Director at Crunchfish Digital Cash.

On January 19th Crunchfish released in partnership with Lipis Advisors a first whitepaper with a focus on practical offline payments design in a new whitepaper and webinar series "[Enabling Offline Payments in an Online World](#)". At the webinar the whitepaper was presented, followed by a panel discussion moderated by Johan Wester with Managing Consultant Bonni Brodsky from strategic payment expert consultancy [Lipis Advisors](#). Beju Shah, [Head of the Nordic Innovation Hub at Bank of International Settlement](#) and Crunchfish CEO Joachim Samuelsson. On January 27th Crunchfish CEO discussed also the ideas behind Crunchfish Digital Cash 2.0 at an expert panel discussion on "[Offline payments for CBDCs and financial inclusion](#)" at the ITU's DC conference "From cryptocurrencies to CBDC".

For more information, please contact:

Joachim Samuelsson, CEO of Crunchfish AB
+46 708 46 47 88
joachim.samuelsson@crunchfish.com

The information was provided by the contact person above for publication 1 February 2023 at 12:00 CET.

Västra Hamnen Corporate Finance AB is the Certified Adviser. Email: ca@vhcorp.se. Telephone +46 40 200 250.

About Crunchfish – crunchfish.com

Crunchfish are a deep tech company developing a Digital Cash platform for Banks, Payment Services and CBDC implementations and Gesture Interaction technology for AR/VR and automotive industry. Crunchfish are listed on Nasdaq First North Growth Market since 2016, with headquarters in Malmö, Sweden and with a subsidiary in India.