

# inVISION

6/2019 · November 2019

## UNOFFICIAL ENGLISH TRANSLATION

The original article was published in German in inVISION, a trade magazine published in Germany. Prepared for CRETEC. The German original remains the reference.

**inVISION Ausgabe 11.2019**  
**Pay-per-View**



CRETEC Pressemappe

Stand: 05.2020

Seite 30 / 116

## Pay-per-view

The full discussion with all three participants is translated. Forecasts, cryptocurrency descriptions, IOTA / Tangle performance claims and business assessments are historical statements from November 2019, not current guidance or independently validated predictions. Original publisher artwork, logos and advertisements are retained in their original language.

Machine vision on a pay-per-view basis may be a future business model: customers pay only for each part inspected, rather than for the vision system itself.



Bild: ©upixa/adobe stock.com

# Pay-per-view

## Vision as a service: new payment models for machine vision

**Pay-per-view offers vision users the possibility of paying no longer for their inspection system, but instead sending the system manufacturer a very small amount for every inspected part. inVISION asked several experts how far this idea can already be implemented.**

**Does pay-per-view already play a role for your customers?**

**Dr. Jürgen Geffe (Vision & Control):** Pay-per-view is one of the visions of Industry 4.0. It would also be possible in industrial machine vision and is certainly an interesting option. In our view, however, good networking of the systems is a prerequisite. We have discussed the topic with numerous potential customers, but at present

pay-per-view is not yet practicable for us in Germany.

**Alexander Trebing (Cretec):** Pay-per-view already plays a role for some of our customers. So far mainly in concepts, but the possibilities are certainly interesting. There are also further use cases for us. For example, inspection results are stored in tamper-proof form in the IOTA Tangle, a cryptocurrency. Like a blockchain, the Tangle is a distributed ledger technology, but it has many advantages in transaction rate, scalability and micropayments, expanding the scope of industrial applications.

One major difference between Tangle and blockchain is that a blockchain becomes slower as the number of users increases and every transaction incurs fees. The Tangle becomes faster with each additional user; transactions are free and can therefore represent even very small amounts (€0.000001). Inspection results are stored securely and decentrally in the Tangle and protected by a password. This creates a dataset of thousands of inspections with the same structure internationally. We can collect and analyse data ourselves and also sell the dataset

**“The pay-per-view concept makes it possible to turn data gold into money.”**

Alexander Trebing, Cretec

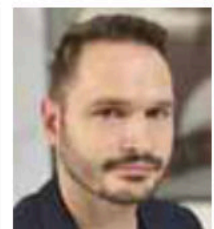


Bild: Cretec GmbH

to other companies, for example for statistical analysis. Settlement takes place reliably in real time through IOTA, across national borders and independently of currency fluctuations. People often say that data is the new gold. The pay-per-view concept makes it possible to turn that data gold into money. You do not have to buy the data source - the vision system - but simply use it.

**Donato Montanari (deevio):** So far, the topic plays no role for our customers or for us.

#### Where do the problems lie?

**Montanari:** There are several aspects. First, costs are difficult for end customers to predict and budget because production volumes can change over the planning period. Second, the business model has an incentive problem. Once an end customer notices that production has stabilised at an acceptable quality level over a period, they have an interest in switching off the vision

**"In my view, it will take a good five more years before the first standard pay-per-view applications are running."**

Dr. Jürgen Geffe, Vision & Control



Bild: Vision & Control GmbH

they support the model.

**Trebing:** At present, the problems are acceptance within industry and fluctuations in cryptocurrency values. However, major industrial companies such as Bosch, VW, Microsoft and Telekom are already in the IOTA network and working on pilot projects, so the topic is currently making considerable progress. There are now, for example, cars with their own wallet so that a vehicle can pay for its electricity itself at a charging station. I expect several industrial machine-vision systems to be linked to the IOTA Tangle within the next five years for data collection or settlement. We are proud to have linked one of the first industrial vision systems to the

to new incoming payments. We therefore do not expect the business model to be used on a larger scale soon. As is usual with predictions, we could also be very wrong.

**Geffe:** We currently have several prototype applications in the field to test various aspects. In my view, however, it will take a good five more years before the first standard applications are running.

**Trebing:** The concept was presented this year with ZeMA, the Center for Mechatronics and Automation in Saarbrücken. Further events with the VDMA are already scheduled.

[www.cretec.gmbh](http://www.cretec.gmbh)  
[www.deevio.ai](http://www.deevio.ai)  
[www.vision-control.com](http://www.vision-control.com)

**"One problem is that the entire supply chain would have to participate in the pay-per-view business model."**

Donato Montanari, Deevio



Bild: Deevio GmbH

system to save costs until production quality changes again and the system is reactivated. This leads to lost payments for manufacturers.

In addition, the entire supply chain would have to participate in the pay-per-view business model. If an individual supplier decides to offer end customers a pay-per-view model while its own suppliers still want payment in advance, it faces liquidity problems. Given hardware prices, it will take some time before pay-per-view revenue alone has recovered hardware costs. An agreement would therefore be needed with all suppliers so that

Tangle.

**Geffe:** Current obstacles include safety guidelines and real-time requirements in industrial processes. System functionality still takes priority. We have, however, already had very good experience with worldwide support for our systems over the internet, which I regard as a preliminary stage.

#### How long will it take before pay-per-view is used?

**Donato Montanari:** As described, implementing the model would require the whole industry to adapt

#### Participants

Alexander Trebing, Managing Director, Cretec GmbH

Dr. Jürgen Geffe, Managing Director, Vision & Control GmbH

Donato Montanari, CEO, Deevio GmbH