Ernst Feiler, Director Technology of the film and television producer UFA in Potsdam.
Sometimes journalists meet interview partners and happen to be very satisfied with the fact that at the end of the day the interview is not going to work out. Ernst Feiler is such an interlocutor. Just a cue and listening to him – a kind of monologue – becomes an experience. The cue: Open Telecom Cloud.

peak, talk and tell. With a dot and a comma, but from the same mould. Fine facial expressions, sweeping gestures – everything in the program. An ambassador in front of the camera, for example, would be honoured by Ernst Feiler’s appearance. And that’s basically what he is at the moment, as Director Technology of UFA, Germany’s largest film and television producer. A double role, if you will, from whose script the little undiplomatic is cut out by a “now times off the records” rapidly. At the beginning, Feiler only thinks very briefly about what his script for the next hour should start with. Proven, already in the opening credits of many cinema films, has ...

“OK, short flashback: In 2014 we worked with our colleagues from RTL to develop a cloud future concept for the film and broadcast industry, which are two separate forms of industry. One has to do with chemistry and immersion baths, the other with large broadcast centers and magnetic recording, which is not really IT either. But we have said that both will be replaced by IT to replace three major technology islands created in 100 years of film and television history. First, the production of formats in which celluloid and EB cameras* are or were standard. In the future, these will be computers with an optical system and a chip – i.e. IT. Second, in distribution. This used to be done via tapes and broadcast infrastructures. Today’s streaming is all digital. So also IT. And the third is our archive. In the past these were tapes and celluloid cans. Today everything is digitalized. Dematerialized”.

MONEY BURNED FOR LOGISTICS

Just five years ago, Feiler looks back,”we already recorded everything digitally, but then physically transported it to another infrastructure called a center, but basically it’s already IT. And when you’re done, you physically transport it to a mine tunnel to archive it there for 10,000 years”. To serve this chain, Feiler is still annoyed today, “means nothing more than burning an enormous amount of money in logistics. But that doesn’t make any film, script or actor any better”.

The next thought brightens his face again: “Ideal would be: Whatever our cameras record, generate digital image data, move it to one place – the cloud – and reference all other value-added processes to it. But this is always about connectivity. A cloud only makes sense if it can find a secure, stable way to get there and back again. In this respect, it is a unique selling point of T-Systems, because we get both there. The cloud and the way. To bring our processes into the modern age, the fastest, cheapest, most intelligent.”
It all started for Feiler and his UFA colleagues long before the cloud with the question: How do we get digital data from a set* into our post production in Potsdam? That’s where courier drivers transport the hard disks from locations like Cologne, Frankfurt or Munich every day. And with the technical details of an alternative solution, Feiler repels, “we don’t want to deal with it as producers. Rather with the details, which play before the camera. We expect a comprehensive service from an IT service provider behind our camera. According to the motto: ‘T-Systems, we just have two terabytes of data here, pick it up and make it available to me again in the shortest possible time. In postproduction and on my cell phone for acceptance’. But how much time, money and CO₂ are still being burned today to transport data carriers from A to B is hard to imagine”.

ESCALATING DATA VOLUMES

Sustainability is a topic on which Feiler only spoke in the morning. He is a member of the UFA Green Team, an employee initiative that has been committed to sustainable television production and office design at UFA since 2014. Feiler knows from his own holidays that the way he deals with material and virtual resources differs greatly. A slide lamp at his home reminds us of this. Farseeing, in the truest sense of the word, he has exposed six rolls of Ektrachrome to gradually equip the slide lamp. “But in the same 14 days I took 3,500 photos with the digital camera. And it’s practically the same with the film set. In the past, people paid attention to the material consumption, because every meter cost money. Today the amount of data is escalating because of digital production, and with UHD/HDR* they will explode again. The good thing, however, is that the amounts of data are simply too large for the subsequent processing chain. This means that you have to generate so-called proxies, i.e. smaller amounts of data, at a very early stage in order to be able to continue producing. And these small derivatives are of higher quality than the HD standard now. Sounds dialectical, but that’s the way it is”.

One thing is also clear to those outside the industry: the higher the data volumes on the set, the more sensible the route via LTE into the cloud. A nod and Feiler agrees. For your understanding: UFA’s order books currently contain thousands of shooting days per year. About ten productions simultaneously employ up to 30 shooting teams every day, spread all over the world. For the series “Gute Zeiten, schlechte Zeiten” alone, 250 GB of data per day are produced in the HD standard. After the switch to UHD, it will be one terabyte per day. An output that will affect all important TV programs and will be followed by a total audience of 30 million people on some evenings in Germany alone. In series like “Charité”, “Ku’damm 59” and “Donna Leon” or show formats like “Deutschland sucht den Superstar”. If two or three EB teams travel through Germany for some programs, the time between the recording and the arrival of the material in post-production can be between 36 hours and five days.

QUANTUM LEAP THROUGH CLOUD-TECHNOLOGY

In the three-month proof-of-concept (POC) of the Open Telekom Cloud last autumn, it ideally took two minutes. “This is an enormous advantage in the sense of ‘time is money’. Extrapolating the result of the POC, we would immediately halve a seven-figure sum per year that the data transport over-all costs for UFA today. Not to mention the CO₂ footprint, which we are rapidly improving in the Open Telekom cloud”. And that’s how the CTO really gets going: “Two minutes’ delay from the recording to the next processing step is unbelievable. A quantum leap that can only be achieved with cloud technology”.

In principle, it will work in such a way that the UFA crews will stream the material via LTE into the cloud during recording, process it there and save the data via backup and generate a derivative for post production in the third step so that an editor can continue working with it. “The manufacturers have not yet reached the point where our cam-
private, public and various special cloud services. This is not possible without partners, orientation aids and mutual guidance. For example, to process large amounts of data locally in 8K, with an intelligent cloud structure that stores the quality of the data for me where I need it for the most diverse processing steps. With regard to the necessary connectivity, it’s great to be working with Telekom and T-Systems. Because I have everything under one roof and at T-Systems I have a rarely creative team to whom our case makes their appetite recognizable’.

LIVE PRODUCTION IN THE CLOUD
Short interruption. Ernst Feiler asks his assistant to have him have a snack in the canteen. Directors Cut, so to speak. But – to stay with the subject – aren’t life-supporting measures what determine the production flow of the UFA?

“Absolutely. That’s what it’s all about. Not only in scenic productions according to script. The next big step,” Feiler says, “is about live productions in the cloud. This is the premier class. ‘Supertalent’ or ‘DSDS’ could be first real projects. Cloud direction of live productions would have enormous advantages, because the local installation of a UHD direction, which e.g. broadcasts a finale of DSDS live, requires high investments. Installed in the cloud, it can be used flexibly and pays for itself quickly. We forecast that a gigantic market. It’s worth it for UFA and T-Systems to get their hands on it together. It’s going to be a long way. But we absolutely want to go it, because...
our goal is to lead the market and not to follow it. Only those who lead the market can influence the effects of digital development on our industry.

It’s already clear that a film rupture in market observation, in the showroom of future technological possibilities, could have fatal consequences. It is important to keep the attention high. For social media productions with a mobile phone, for example, via an easy-to-use equipment setup. With T-Systems, UFA wants to build a standard and develop a media production app that maps the entire production chain for YouTube and Instagram users. Feiler’s vision: “I’ll be able to buy the set in the T-Shop, download the app and automatically play everything from my mobile phone into the T-Systems cloud to edit it like professional VJs at ‘divimove’*. With editing, with colour grading*, subtitles. Users of Facebook and Co. are just waiting. That will be the next mass market.”

Based on his experience with the Open Telekom Cloud, the UFA technology boss sees three things to be done in addition to the social media plans: “First: Building a stable service delivery from last year’s proof-of-concept for 7/24 provisioning. Second: After fictional productions, design another POC for live productions and third: further develop the data case that synchronizes all processes in two minutes. Step by step, simulate, log, scale. For this we have to develop the technology, new tariffs and business models. This takes a minimum of 24 months. But perhaps the attraction of the possibilities that lie ahead can speed things up a little”.

With this seductive thought Feiler looks outside again, on the other side of the road. To the “Metropolis Hall”, which in reality is called the “Marlene Dietrich Hall”. In 2012, the most expensive German movie ever was shot here. Tom Hanks was on the cast list, Halle Berry, Hugh Grant and many others. The title of the film: “Cloud Atlas”. Actually, Feilers cue again.

---

**Glossary**

- **MAZ:** Magnetic recording
- **EB camera:** TV cameras for electronic reporting
- **Broadcast Center:** Media center for television broadcasting
- **Set:** Location or film motif for filming
- **UHD/HDR:** video formats Ultra High Definition and High Dynamic Range
- **8K:** Horizontal image resolution of 8,000 columns
- **divimove:** Europe’s largest influencer network
- **Colour Grading:** Colour correction
- **VJ:** Video- or Visual-Jockey in the style of Disc-Jockey

---

* Photos: iStockphoto, Marko Priske