

# Spin Digital High Performance Video Codecs

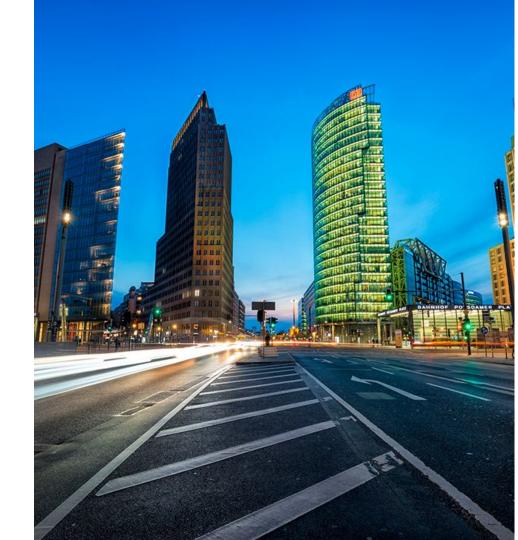
Company Presentation 2024

https://spin-digital.com/

#### 1. Introduction

# Spin Digital Labs

- Develops and licenses software video codecs (encoders/decoders)
- Based in Berlin, initially founded in 2015
- 10+ years of accumulated experience and software development
- B2B software licensing
- 20+ customers in the Media, IT, and Telecommunication industries.



#### 2. Problem / Opportunity: Video Codecs

**Video codecs** are an <u>essential technology</u> for making video a practical and accessible part of the current digital world.

**Video codecs** have evolved to become <u>highly</u> <u>complex systems</u> that need to fulfil increasingly demanding requirements: quality, performance, ultra-high definition, low-latency, etc.



YouTube's Existence is Insane: How Video Compression, Encode, & Decode Work (Youtube)

"Without compression just Youtube will need 130x more bandwidth than the global Internet bandwidth". Tom Petersen. Intel Fellow

#### 3. Technology: Advanced video codec architecture

Perceptual coding, image processing, color science

Designed for live applications

Latest codec standards: HEVC, VVC



Flexible software architecture

Ultra efficient algorithms: 8K 120fps

Competitiveness is determined by overall size of dimensions

#### 4. Business Model: Software licensing

- License video codecs as applications: encoder & media player
- License video codecs as components: SDK







SDK
System Integrator
Final Users

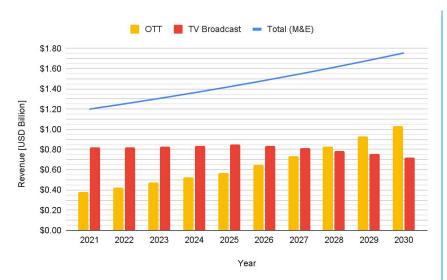
Spin Digital Codec

Spin Enc Live

Spin Player

Spin SDK

#### 5. Market Size: Video codecs for M&E



TAM: Estimated video encoder market revenue until 2030 for OTT and TV broadcast services

Market segment	SAM (m€)	SOM (m€)
Streaming platforms	57.1	3.42
Broadcast and OTT equipment	17.0	2.04
Encoding platforms	39.5	1.19
Postprod. & content creation	4.0	0.48
Total	117.6	7.13

- Estimated SAM and SOM for video encoders (HEVC and VVC)
- SAM based on data from 2023, SOM projected for 2028
- Market Data Forecast. 2022. "Video Encoder Market Size, Trends, and Forecast: 2021-2026."
- Rethink TV. 2021. "Media and entertainment transcoding workload device and royalty forecast 2020-2030"
- Verified Market Research. 2021. "Video Encoder Market Size, Share, Scope, Growth, Trends, and Forecast to 2025."

#### 6. Competitive Analysis: USP

Compared to other software encoders for live applications E.g. MainConcept HEVC/VVC

Compared to directly competing software solutions, our encoder is better in all metrics.



Compared to hardware encoders for low-latency live applications E.g. Nvidia Nvenc HEVC

Hardware accelerated encoders (ASIC) offer lower latency, but at the expense of low compression and low visual quality.

Spin Digital provides the best combination of all features!

#### 7. The team



Chi Ching Chi CEO / CTO

Main developer of the company's core video coding technologies. 10+ years of video codec development experience. MSc degree in computer engineering at Delft University of Technology (The Netherlands).



Mauricio Alvarez-Mesa COO / CBO

Business development, technical projects, and industry partnerships. PhD degree in computing engineering at UPC (Spain). Post-doc researcher at TU Berlin and Fraunhofer HHI. Project leader of Immersify EU project. Intern researcher at IBM (Israel).



Thomas Siedel Software developer

Expert software developer in video streaming and audio technologies. In charge of Spin Digital live encoder products. With Spin Digital since its foundation.

MSc degree in Computer Engineering at Technische Universität Berlin (Germany).



Haifeng Gao Software Developer

Expert software developer in media playback and SDK. In charge of Spin Digital media player products. With Spin Digital since its foundation. MSc degree in Computer Engineering at Technische Universität Berlin (Germany).

Spin Digital. Confidential

#### 8. Milestones and timeline



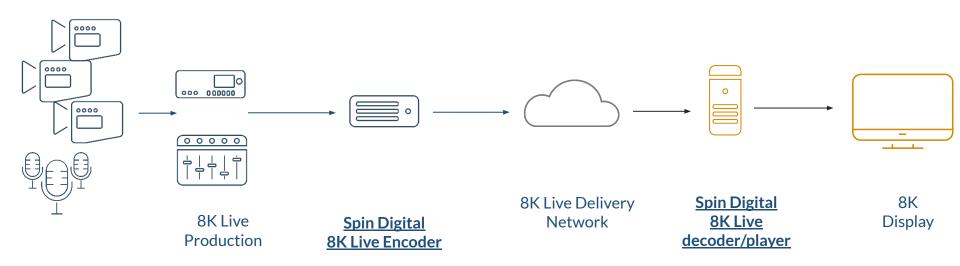
We are ready to tackle constantly evolving challenges in video compression: growing demand for high-end video applications, next-generation video codecs, and emerging computing platforms.

## 9. Spin Digital Labs and Startups @ HHI

- Spin Digital Labs joined the HHI accelerator
  - <a href="https://www.hhi.fraunhofer.de/en/start-ups-at-hhi.html">https://www.hhi.fraunhofer.de/en/start-ups-at-hhi.html</a>
- Mutually beneficial collaboration with Fraunhofer HHI video coding team
  - Video coding technology
  - Video coding implementations
  - Video coding business



## Demo: 8K VVC live encoding, streaming and playback



Input video: 8K 60 fps 10-bit. 48Gbps

Compressed video: VVC/H,266 avg. 30 Mbps. max 60 Mbps

# Spin Digital Labs

An innovative company developing state-of-the-art video coding technology, with a solid and motivated core team, existing customer base, possibilities of growth and expansion to new markets.

