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Institut für Offene Kommunikationssysteme

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FAMIUM SAND

Deep Streaming Metrics and Coordination using DASH SAND

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helps *streaming providers*

solve **unreliable delivery and client playback for live video streaming**

by **introducing a solution allowing to collect streaming metrics and autonomously optimize streaming parameters across multiple video players and network segments powered by machine learning.**

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THE FAMIUM SAND STREAM ANALYTICS SOLUTION

Collect

- collect streaming metrics
- In depth video client data

Analyze

- Autonomously optimize streaming parameters
- Understand problems and client behavior
- Powered by machine learning

Report

- Provide technical recommendations
- Automate video workflow analysis
- Optimize user experience

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Streaming Metrics and Analytics

Avg. video bitrate	HTTP errors	Screen Height
Background	IP address	Screen Width
Bitrate distribution	Locale	Session Duration
Browser	MPD URL	Session ID
Buffer Level	OS/CPU	Startup time
Client ID	Operating system	Timezone
Connection type	Orientation	Video element height
Device type	Pixel-ratio	Video element width
Desktop/Mobile device etc.	Platform	
Downlink	Rebuffer count	
Dropped frames	Rebuffer percentage	
Effective type	Rebuffer rate	
Fullscreen	Representation Switches	
GET Requests	Round trip time	

✓ **Collection and analysis of OTT streaming metrics**
- Start-up/ buffer times, representation switches, bitrates, dropped frames, etc.

✓ **Monitoring Tool**
- Detect problems with new devices, software updates..
- Reliability of VoD/Live, ad-insertion sessions