SVT OPEN CONTENT

A piece of natural complexity

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WHAT IS OPEN CONTENT

Open Content is a concept where you distribute a set of media files that anyone can download and use, usually without major restrictions to that usage

WHY DID WE DO IT

- Continue SVT's tradition of helping the video quality research community by providing high quality material

- In the same spirit as open source, we are promoting transparency and creating useful assets for the public

- We saw that there was a demand, and we would have created this content for ourselves anyway

TECHNICAL DETAILS

TECHNICAL INFORMATION

Production details can be found in table 1. Post-processing information is found in table 2, and information on output formats is found in table 3.

Original on-location Production	June 2021 (Post Production July 2021)
Producers	Sveriges Television AB (SVT), Video Core Team, Olof Lindman, olof.lindman@svt.se
Camera	Blackmagic Design Ursa Mini Pro 4.6K G1
Recording Framerate	50 frames per second
Shutter Speed	1/100 s
Lenses	Zeiss 35 Prime Lens, Xeen 35mm T1.5 Lens
Recording Formats	CDNG Raw Lossless, BMD RAW Q0
Capture Resolution	Width: 3840 pixels, Height: 2160 pixels
Recorded Bit Depth	12 bit **(as in 12 bit log, read as 16 bit linear)**
Known Issues	The camera sensor contained at least one dead pixel

Table 1: Production details

Software	Blackmagic Design Davinci Resolve Studio
Monitor Dynamic Range	SDR (7 Stops)

Table 2: Post processing specifications

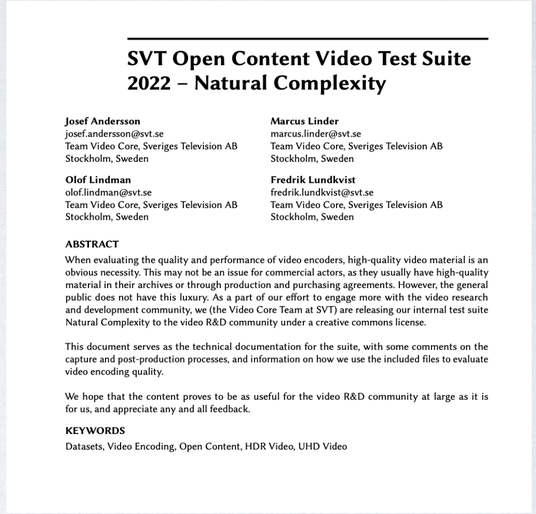
Standards for Primaries and Transfer Functions	ACES AP0 (ACEScc, No IDT or ODT), Rec. 709, Rec. 2100
Data Formats	EXR RGB Half Float (ZIP Compression), JPEG2000 Lossless YUV444 12 bit
Bit Depth	16 bit, 12 bit
Resolution	3840×2160
Framerate	50 frames per second
Audio	None
Containers	OpenEXR, QuickTime MOV

Table 3: Output formats

HDMI 3
16:9
2160p
HDR
BT.2020
PCM
12G SDI
CODEC
DNxHR HQX
FORMAT
2160p50
00:00:00:00
SOURCE
HDMI
AC
Rec.2020 - ST2084 (1000)
10000
4000
2000
1000
500
300
100
20
2.2

PUBLIC RELEASE

- Content along with a white paper was released in February
- We have already made modifications to the content based on comments and collaborations (latest one was in April)



SVT Open Content Video Test Suite 2022 – Natural Complexity

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ABSTRACT

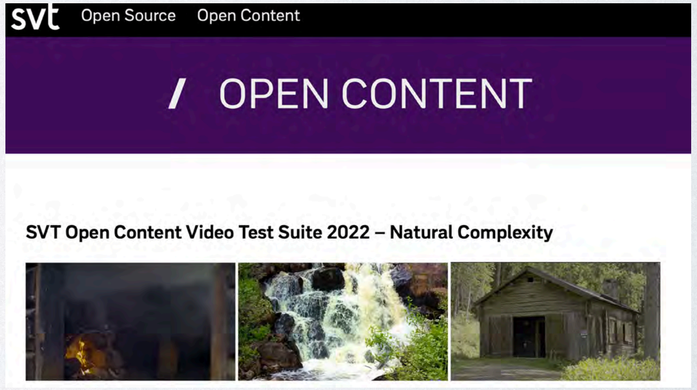
When evaluating the quality and performance of video encoders, high-quality video material is an obvious necessity. This may not be an issue for commercial actors, as they usually have high-quality material in their archives or through production and purchasing agreements. However, the general public does not have this luxury. As a part of our effort to engage more with the video research and development community, we (the Video Core Team at SVT) are releasing our internal test suite Natural Complexity to the video R&D community under a creative commons license.

This document serves as the technical documentation for the suite, with some comments on the capture and post-production processes, and information on how we use the included files to evaluate video encoding quality.

We hope that the content proves to be as useful for the video R&D community at large as it is for us, and appreciate any and all feedback.

KEYWORDS

Datasets, Video Encoding, Open Content, HDR Video, UHD Video



Waterfall
Difficulty: 3

Smoke Sauna
Difficulty: 4

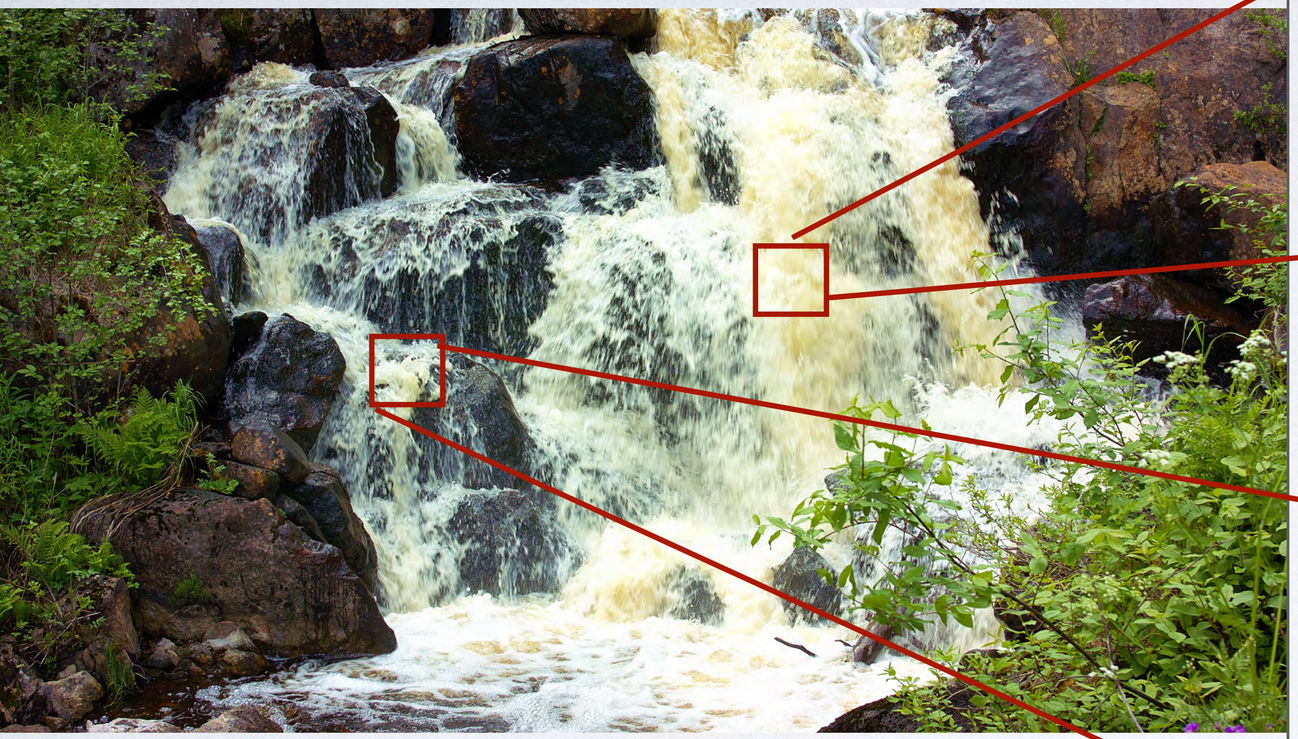
Forest Lake
Difficulty: 2

Midnight Sun
Difficulty: 5

Smithy
Difficulty: 1

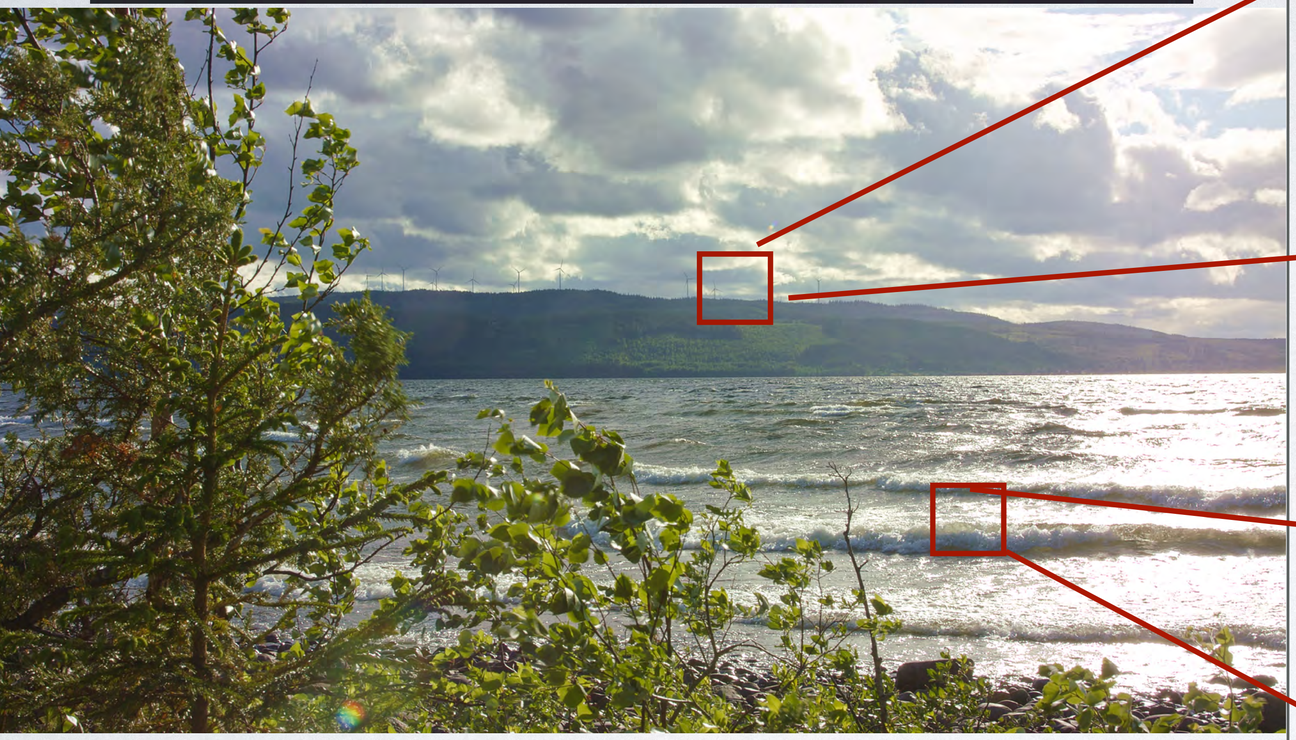
Water Flyover
Difficulty: 3

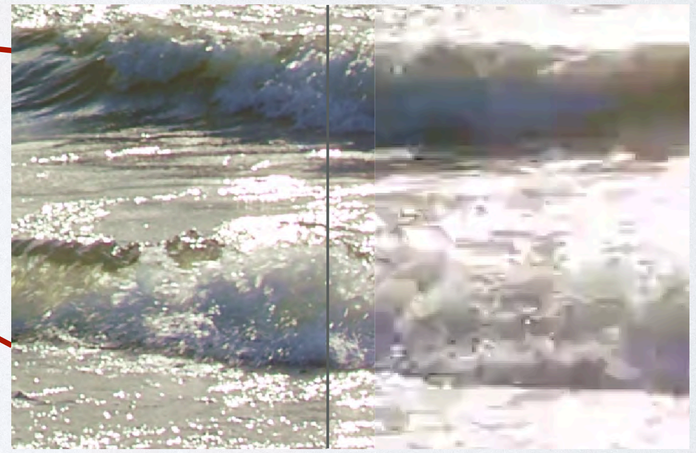
Natural Complexity
70 seconds



Waterfall

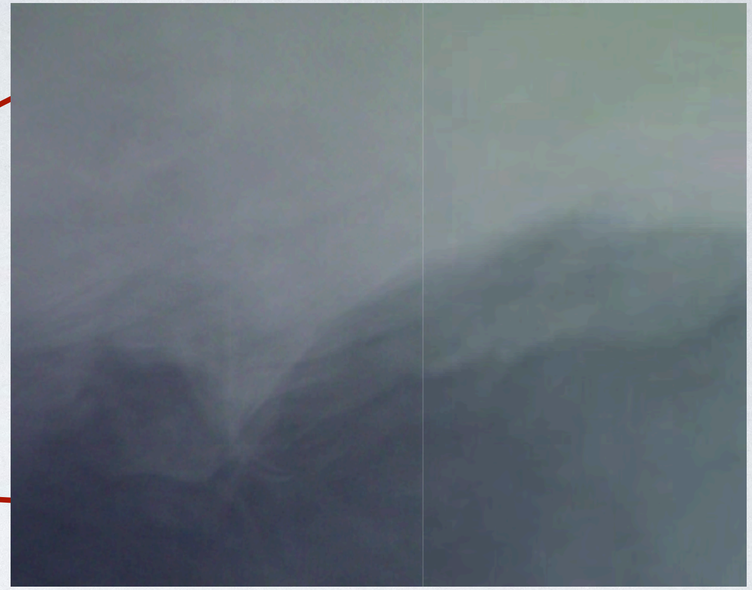
Difficulty: 3





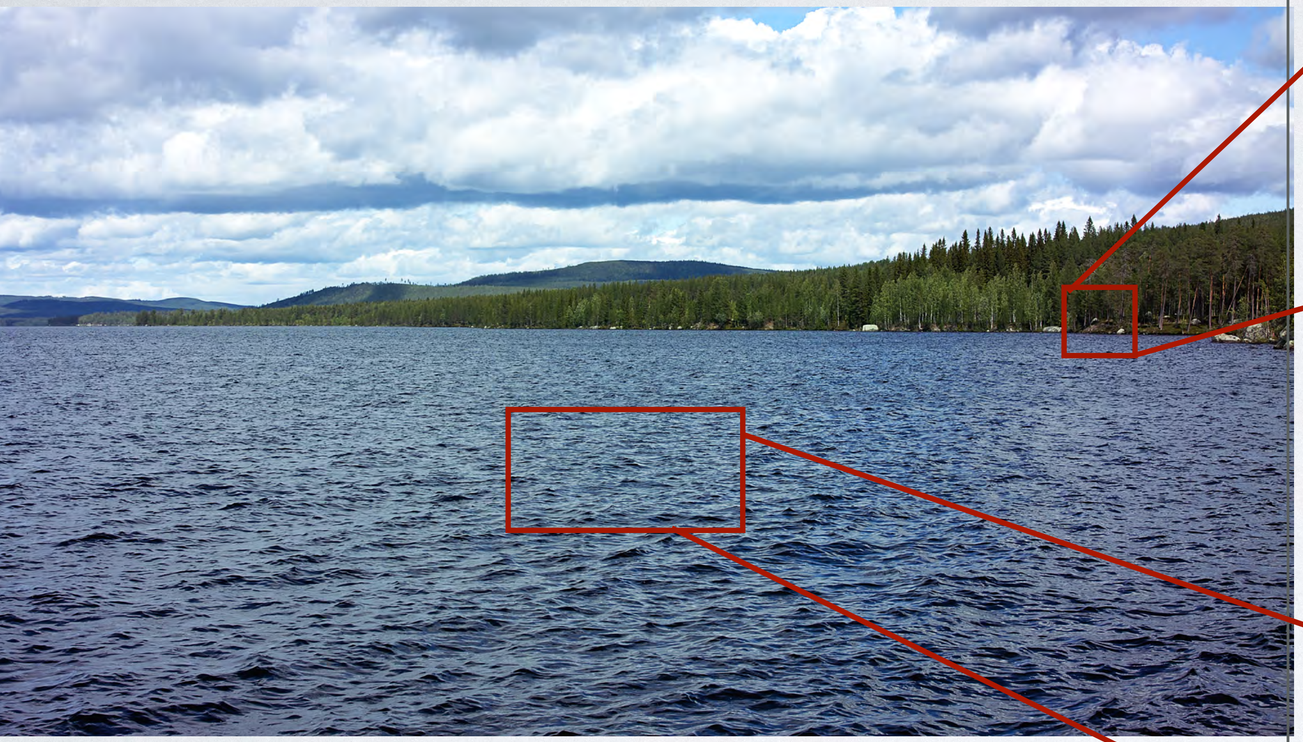
Midnight Sun

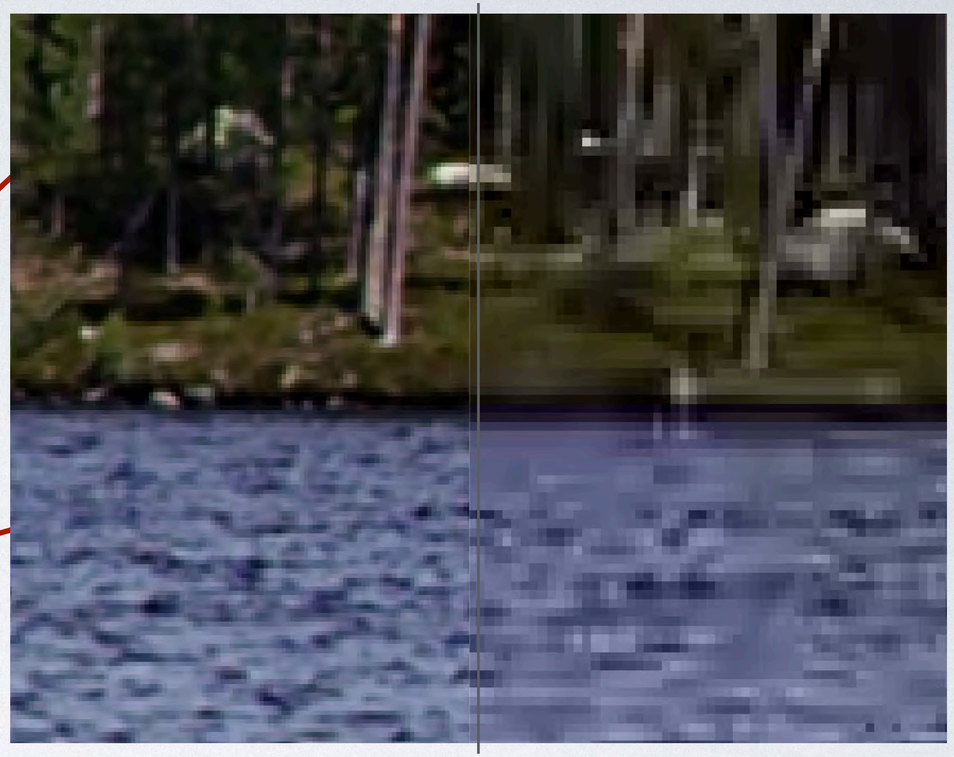
Difficulty: 5



Smoke Sauna

Difficulty: 4





Forest Lake

Difficulty: 2

Smithy

Difficulty: 1

INITIAL RECEPTION

Positive reactions from industry insiders

- Test content that is up to modern standards is hard to find
- Already in use by other public broadcasters as part of their test batteries for encoders

Approximately 23 TB downloaded within the first week

WHERE ARE THE FILES?

Hosted at:

https://www.svt.se/open/content/