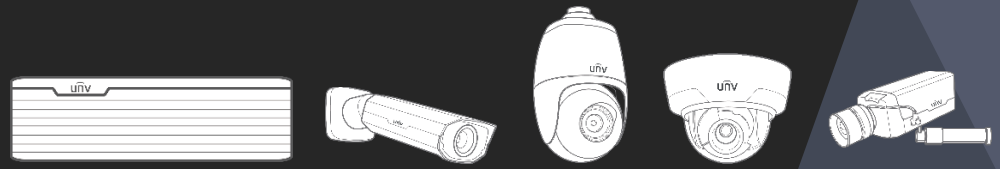
Uniview Technologies

U-code Introduction

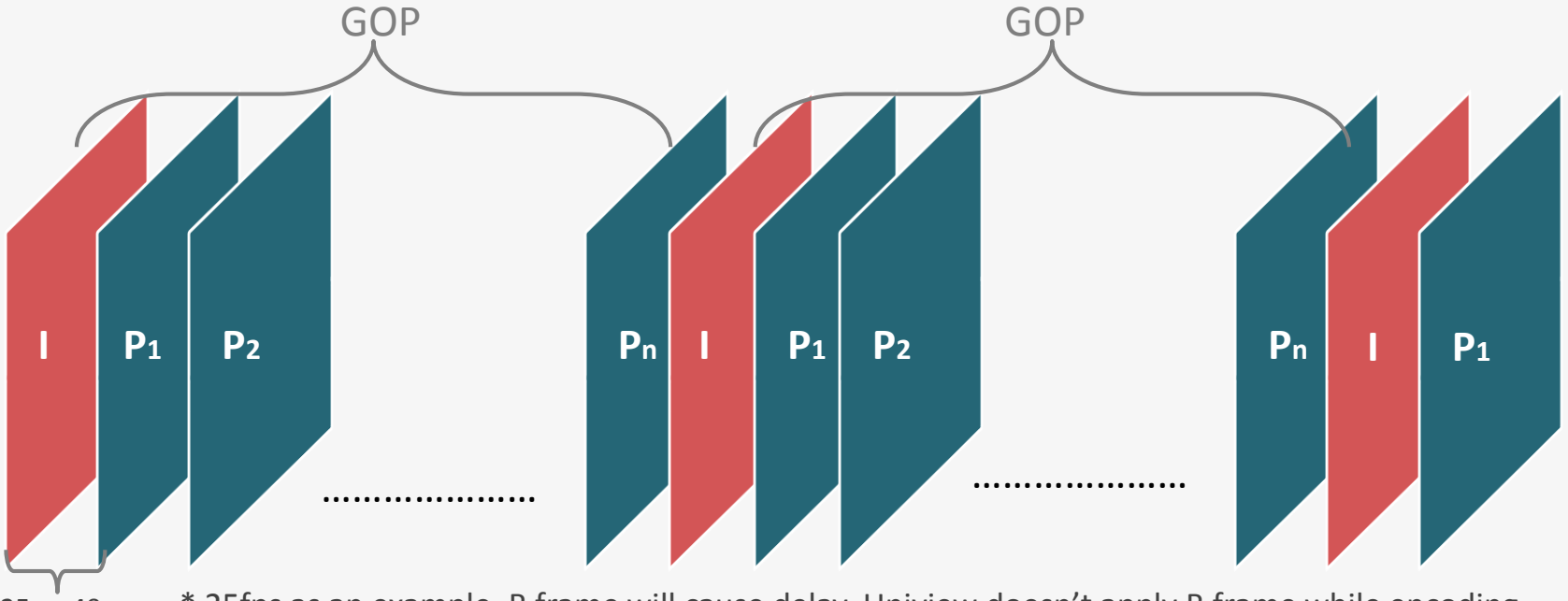


Contents

Contents

Video Compression

- ✓I Frame (Intra Frame): the key frame.
- ✓P Frame (Predictive Frame): the predictive frame
- ✓GOP: Group of pictures



* 25fps as an example. B frame will cause delay, Uniview doesn't apply B frame while encoding.

Contents

U-Code Compression

Phase I **U-code mode**	* Up to 80% bandwidth reduction	* Support 3rd party VMS
Phase II **U-code Pro mode**	* Up to 95% bandwidth reduction	* U-code Pro mode only support Uniview IPC works with Uniview NVR or VMS * NVR supports **Fast Forward Playback,** and **Accurate Record Retrieval**

* IPC is configurable between U-code and U-code Pro

U-Code Compression

U-code is an enhanced encoding technology based on H.264/H.265

80%-95% Reduction in Bandwidth

80%-95% Reduction in Bitrate

2MP IPC as an example

H.264: 4Mbps → U-Code: 0.2~0.8Mbps

H.265: 2Mbps → U-Code: 0.1~0.4Mbps

80%-95%

U-Code Compression

U-code is an enhanced encoding technology based on H.264/H.265

80%-95% Reduction in Storage cost

2MP IPC as an example

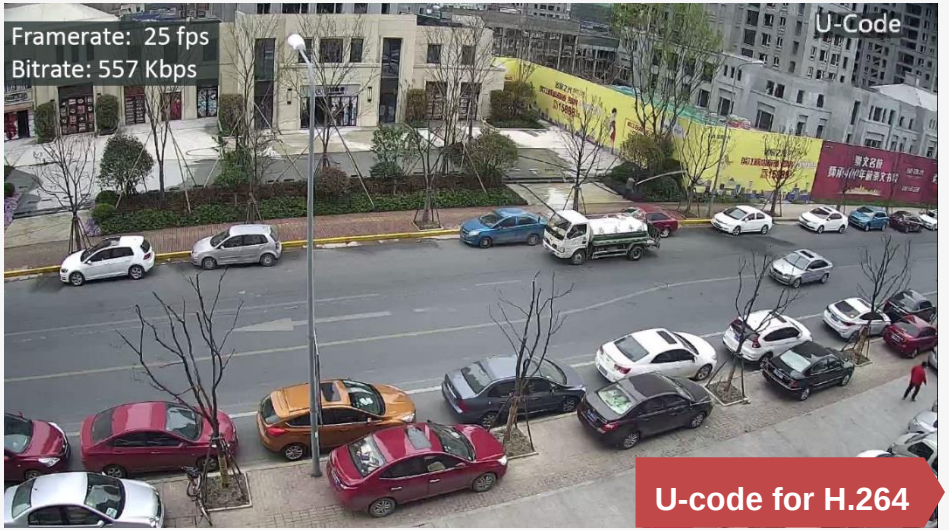
H.264: 42G/Day → U-Code: 2.1~8.4G/Day

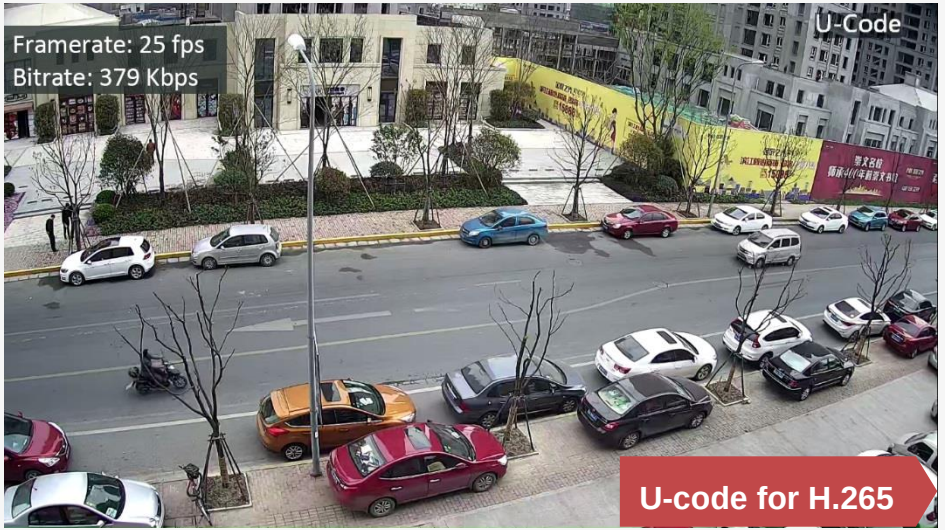
H.265: 21G/Day → U-Code: 1.05~4.2G/Day

80%-95%

U-Code Compression

4Mbps bit rate down to 1Mbps or lower, but no reduction of image quality





U-Code Compression – IRP Technology

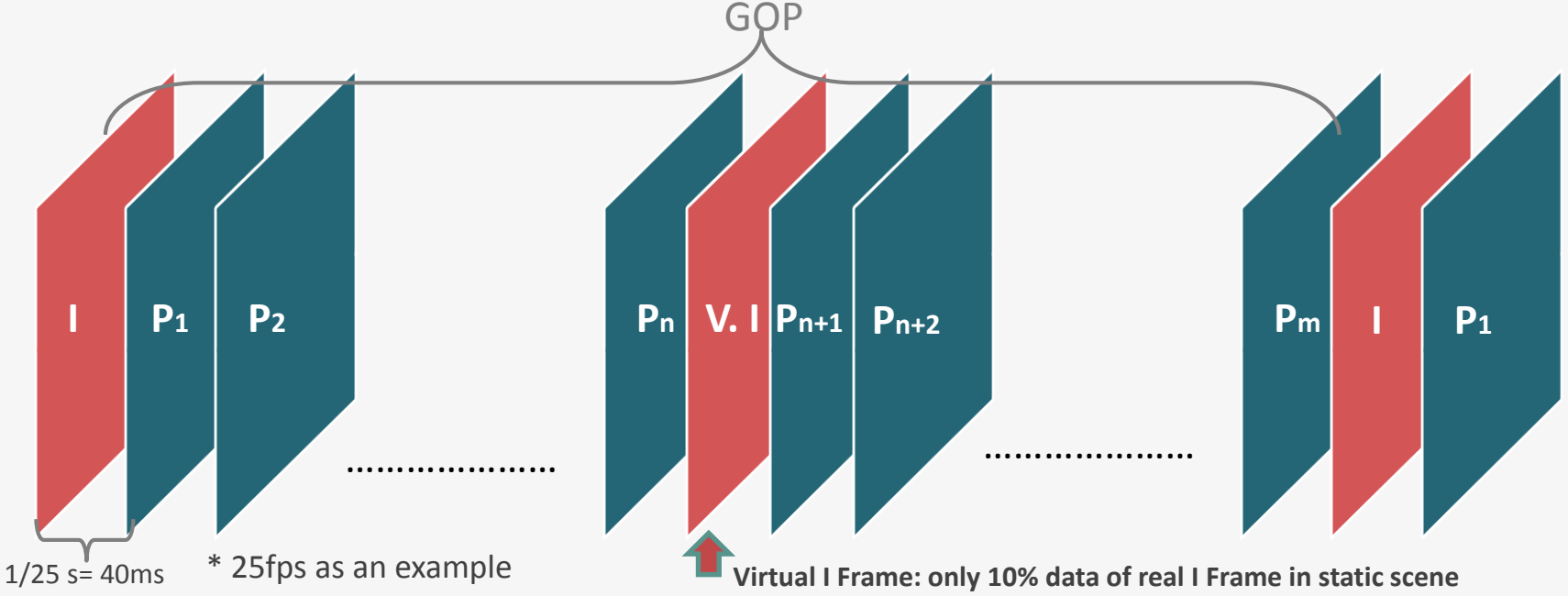
IRP (Intelligent Region Perception)

- Identify the motion area automatically
- High compression rate for static area, and low compression rate for motion area

U-Code Compression – EF Technology

EF (Intelligent Region Perception)

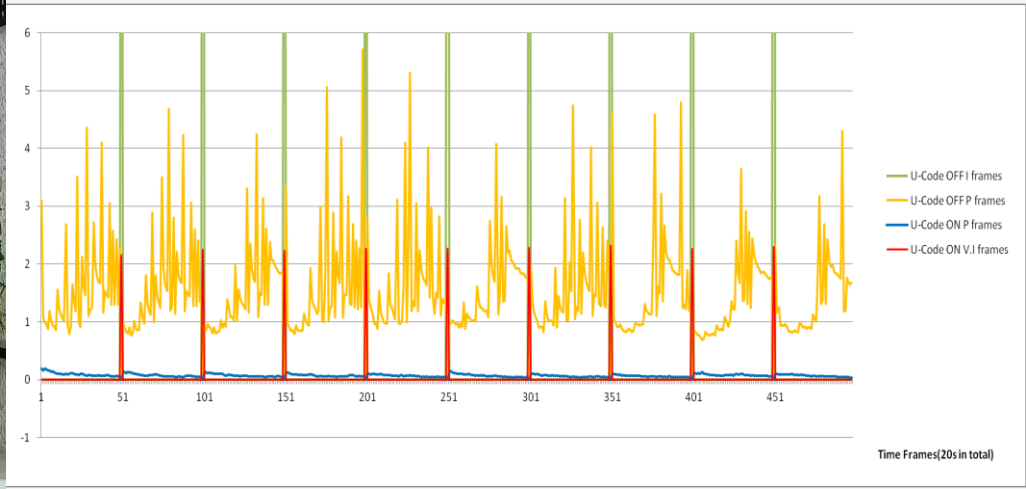
- Dynamic GOP to reduce I frame for bandwidth reduction
- Virtual I Frame as reference to record play back



U-Code Compression Data

Static scene :

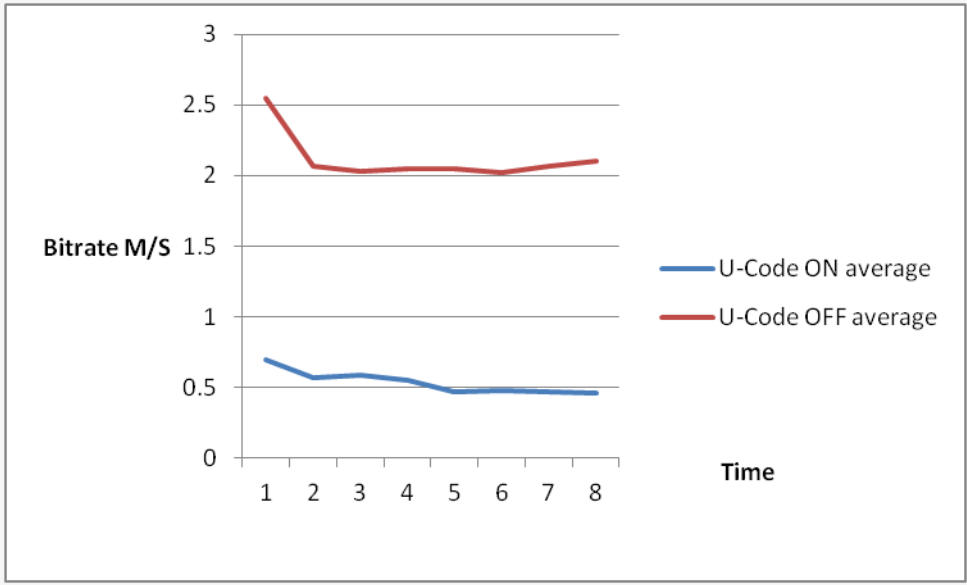
U-code Virtual I Frame and P Frame both have obvious bandwidth reduction



U-Code Compression Data

Motion scene :

U-code average bitrate is down to 0.5Mbps or lower



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THANKS