

Tech Tip 140042

VIGIL: Understanding Motion Detection

Tech Tip #:	140042-2
Date:	August 28 th , 2015
Product Affected:	VIGIL Server
Purpose:	This tech tip has been created with the purpose of educating a user on the process behind VIGIL's Motion Detection feature.

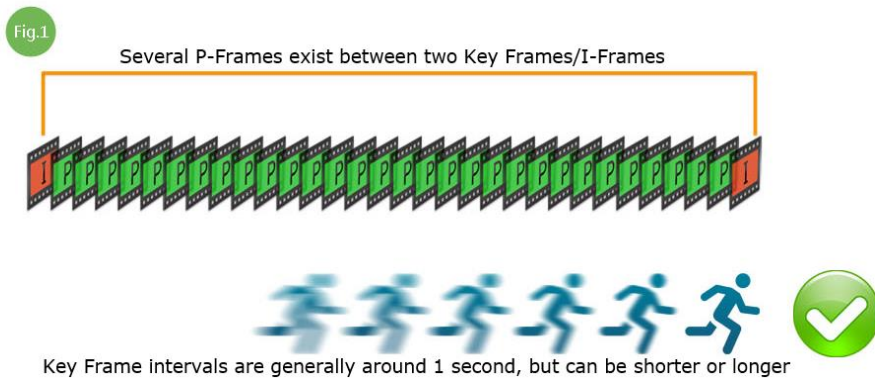
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1 Introduction

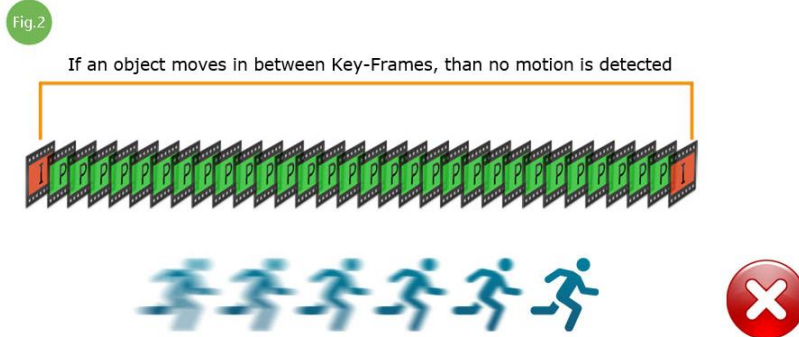
This tech tip provides information and diagrams regarding VIGIL's motion detection system. Recent improvements to the pre-buffer system to further help to further safeguard VIGIL against footage loss are also explained.

2 How VIGIL's Motion Detection Works

To save CPU usage, 3XLOGIC has engineered VIGIL to only detect motion in *Key-Frames* (also referred to as *I-Frames*). If a difference is found between the previous and current *Key Frame*, the motion detection is triggered (see Fig.1).



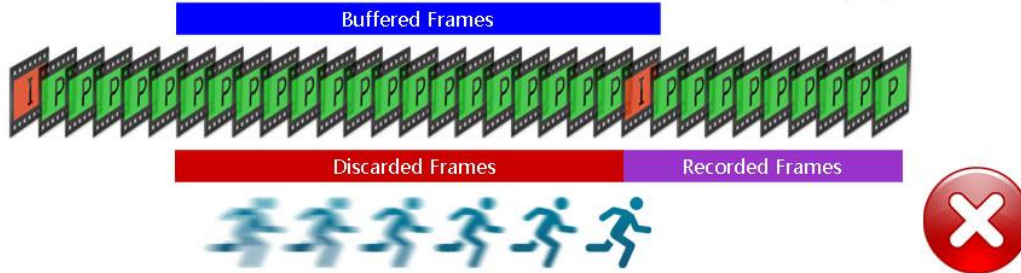
If a long key frame interval is configured, and an object moves while in between Key Frames, than VIGIL motion detection would not be triggered (See Fig.2)



As a result, in rare circumstances where a VIGIL system's pre-buffer is too short, and its Key Frame interval is too long, the possibility of losing small amounts of footage exists (See Fig.3).

Fig.3

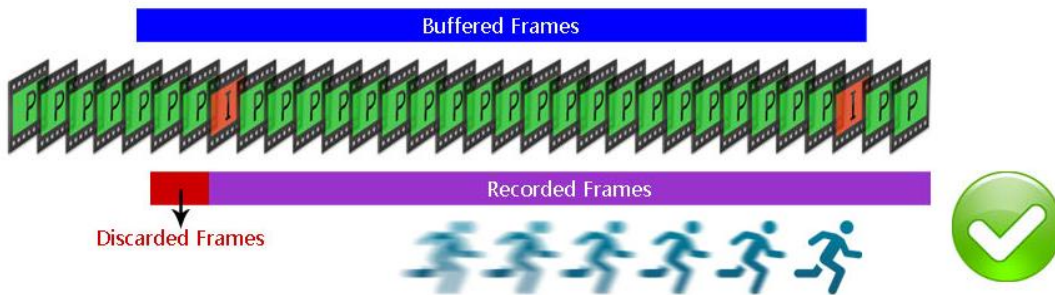
If the video pre-buffer is too short and the key frame interval is too long, small amounts of footage may be lost when motion is detected between I-Frames/Key Frames



To address this issue, 3xLOGIC has engineered, as of VIGIL v7.40.0239, a more intelligent pre-buffer system. The new pre-buffer will look to keep 1 Key Frame in the pre-buffer at all times to avoid losing any footage. When a VIGIL system has been configured to have a long Key Frame interval, the pre-buffer will automatically adjust itself to hold 90 frames to keep at least 1 Key Frame present in the pre-buffer at all times. (See Fig.4).

Fig.4

The new pre-buffer will automatically increase its size when long key frame intervals are configured, effectively preventing the loss of motion detection footage by keeping 1 Key Frame in the pre-buffer at all times



3 Contact Information

If you require more information, or if you have any questions or concerns, please contact 3xLOGIC Support:

Email: helpdesk@3xlogic.com

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