

# VIDEO ANALYSIS – A PRACTICAL GUIDE FOR COACHES BY MIKE HALL

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*This article is intended to be a very basic introduction on how video analysis can be used by non-professional clubs which may be on a very limited budget and the information is necessarily fairly basic. However, Mike intends to write a later piece that looks in greater depth at team and individual analysis in the game.*

While watching the 6 Nations on TV, did anyone spot the learned looking man sitting behind Brian Ashton with his head buried in an Apple Mac laptop? Or the headset-wearing individuals at the Millennium Stadium who were feeding live, real-time information into Gareth Jenkins and his coaching team? These were the performance analysts of England and Wales trying to give their teams the 1% edge required to ensure victory on the international stage. In the professional game, the role of the performance analyst is undertaken by full-time individuals who carry out hours of in-depth analysis of their own team, the opposition and the referee. They are supported by a range of camera angles and thousands of pounds worth of computer hardware and software, enabling coaches to break down the game into the smallest components for intricate examination.

The question is “How can teams at lower levels of the game go about analyzing their own performance and gathering information about improving individuals, units and team performance?” The following section is intended to act as a practical guide to teams looking to introduce the use of basic video analysis into their clubs. It is not a comprehensive list and doesn't follow any published best practice models, but is instead some (hopefully!!) useful hints and tips to assist coaches with limited time and resources available to them.

## **(1) Videoing the game:**

- a. **Equipment** – a wide range of cheap, yet versatile, home video cameras is available on the market, which will perfectly suit the role of capturing game action. A sturdy tripod is also a useful investment and will provide steady and consistent shots rather than a shaky-hand “Blair Witch Project” look! There is little need to spend hundreds of pounds on expensive

equipment with a multitude of gadgets and functions, when most clubs will probably have their own home movie “Luc Besson”, who may be prepared to loan his camera every Saturday afternoon!

- b. **Location** – If it is available and safe to do so, utilize any natural or man-made height to get the camera elevated (grass bank, balcony on clubhouse, fire escape from upper floor of clubhouse etc). Whether this is ‘end on’ or ‘side on’, the height will help to give a good overall perspective of the whole pitch and take away the potential for any replacements, coaches or spectators interrupting the camera shot. If ground level is all that is available, I suggest positioning the camera behind the posts, (encroach into the in-goal area when play is at the other end!!), on one of the 15m lines. This will give the coach the best view possible of the action from ground level. Most coaches prefer the footage to be filmed from behind their team, (meaning a change of ends at half-time is required); this also enables the player numbers to be visible, making identification on wider shots easier. (This view is excellent for viewing lineouts, defensive structure and attacking running lines. However, the front-row will not be happy as scrum engagement is not best showcased from this end-on position!!).
- c. **Shooting** – All coaches will have their own preference on how close or how far away they want the camera to zoom while the action is taking place. Too close and it is difficult to gauge the overall structure of defensive and attacking patterns, too far away and individuals become difficult to pick up. The coach should try to utilize pre-season friendlies or summer training sessions to give the cameraman an opportunity to practise and then decide on the type of shots required. Zooming in and out and predicting the movement of the ball can be a difficult skill to master, so the more practice the cameraman can get of capturing rugby action the better. (I would suggest a fairly close shot for lineouts, getting the hooker in one side of the screen and the tail of the line in the other side, so that movement of lifters and jumpers and timing of the hooker’s throw can be analyzed).
- d. **Practicalities** – Stop and start the camera during breaks in play so that the tape captures ‘ball in play’ – this will reduce the length of the movie to approx 40minutes, makes transfer onto computer quicker and uses less storage space on the computers hard-drive. If powering the camera from the mains is not possible, it may be worth investing in an ‘extended life’ battery to ensure the whole game is captured. (Remember when operating with a side viewfinder window open, the battery life will be far shorter than normal). Devise a waterproof ‘case’ for the camera – I have seen some ingenious people utilize carrier bags and elastic bands or sleeves cut

from old waterproof jackets etc – this will prove invaluable for the long winter Saturdays spent standing in the rain!

## **(2) Transferring onto computer:**

Most home PCs and laptops now contain excellent, user-friendly video editing packages which make storing, managing and editing game footage very easy even for the inexperienced user. Programmes such as Windows Movie Maker (available as a standard windows programme > “go to Start Menu > All Programs”) and iMovie (available as standard on Macs), contain excellent help and tutorial sections which will enable beginners to pick up the basics of working with video footage extremely quickly. I would suggest transferring the footage from camera to computer as soon as possible after the final whistle (via USB or firewire link). A laptop would enable the game to be transferred in the clubhouse straight after the game and the finished product could be available for the coach in about fifty minutes after the end of the game. Once the game has been saved into the computer programme, it is easily copied to disk or other external storage devices (USB drives, external hard drives etc) to share amongst players and coaches alike.

## **(3) Qualitative Review / Analysis of the footage:**

There is a number of specialized video analysis programmes used in the professional game, including Prozone ©, Verusco ©, Sportscode ©, Dartfish © and Focus X2 ©. These software packages vary in their cost, but may be within range of some clubs. However, the basic video editing software outlined above can enable the coach to ‘cut up’ the game into its component parts for easy analysis. The split clip function on Moviemaker and iMovie makes gathering and collating all the attacking lineouts, defensive lineouts, attacking first phase backs’ moves, backs’ defence from first phase, attacking scrums and defensive scrums a fairly straightforward process. These clips can all easily be placed together on the timeline, making review a quick and uncomplicated process. These ‘unit’ movies can then be saved separately and possibly shared with the players, either before training or on disk (many people use USB pen flash drives at work and these can be used to store and review movies in their own time). Most clubhouses have big screens and projectors (or large TVs / monitors) and these should be utilized by the coaches on training nights to share footage with the team, (if the coach is going to put the work in to review the footage and analyze the footage it MUST be shared with the players!). While analyzing the game, look for three or four themes to concentrate on. It may be two in attack and two in defence. Then, using the video editing software, look to pick out two or three good examples to illustrate each point – e.g. the defensive line may not be moving forwards towards the attackers quickly enough, so pick two or three examples showing defenders being passive and allowing the attackers to carry the ball to them and place them together into a small ‘defence review clip’). This review process, backed-up with clips from the game, will prove to be a most valuable tool to all coaches. It will

enable you to question individuals to check their understanding of their own role and the team structures and systems, as well as critically analyzing the performance of all players. (A word of warning – it is best to put a time limit on these video review sessions (no longer than 15 minutes) as the desire to share information with the players can sometimes become so great that the session drags on too long, disinteresting the players and eating into valuable training time).

#### **(4) Quantative Review / Analysis of the footage:**

When the game has been broken up into its component parts and small movies created, it can be very easy for a coach to review the footage and produce some Key Performance Statistics for the players to see, (some examples of these can be found below). The coach needs to decide upon the statistics that are relevant to his/her team and look to monitor these over a season, setting targets for the team to achieve week by week.

Some examples of the Key Performance Stats may be as follows –

- (i) **Restart receipt success** – how often do we cleanly catch the restart and execute the next phase correctly?
- (ii) **Lineout success** – how often do we retain the ball on our own lineout?
- (iii) **Lineout spoil success** – how often do we spoil or prevent the opposition getting quality ball in the lineout?
- (iv) **Scrum success / spoil success** – as above but for scrum.
- (v) **First phase strike move success** – how often do we get over the gainline from scrum/lineout when we attempt a strike move?
- (vi) **Unforced turnovers conceded** – how often do we make a mistake that hands the ball back to the opposition? (Some coaches may not wish to know this figure!!!)

This list can consist of whatever the coach deems necessary and, as long as it is easily measurable and consistently done, then comparisons over a season are valid. Each team will have strengths and weaknesses in different areas so it will be up to individual coaches and their teams to set their own Key Performance Statistics targets for themselves – (examples of international stats can be found by visiting the IRB website – [www.irb.com](http://www.irb.com) – and going to the “Game Analysis” section).

It is also worthwhile keeping a record of all tries scored and conceded throughout the season. A simple spreadsheet, recording information such as where on the pitch the try was scored/conceded from (defensive 22, defensive 22 to ½ way, ½ way to 22, attacking 22), from what source was the possession (lineout, scrum, tap penalty, kick reception, restart, turnover etc), how many phases it took to score/concede and which position scored the try (prop, hooker etc) all enable the coach to gain a good understanding of how and where they are conceding and scoring tries.