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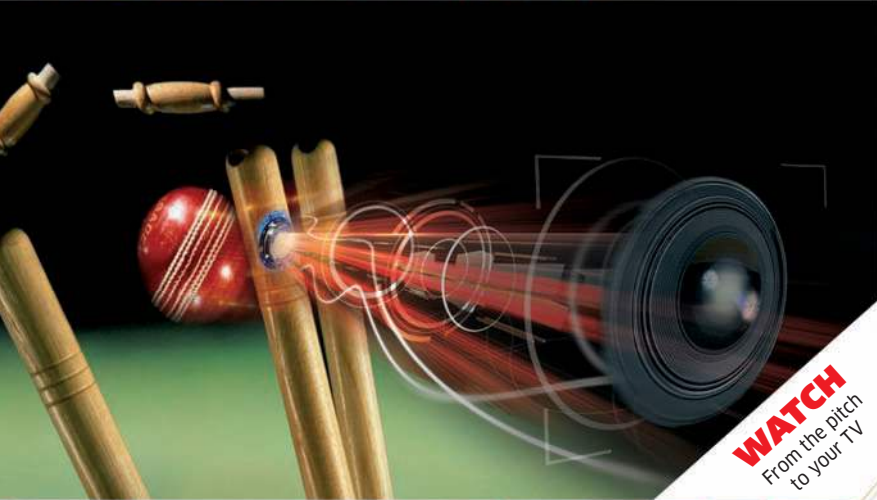
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TECHNOLOGY POWERING THE IPL

We go behind the scenes with the Mumbai Indians

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Cricket today is played very differently with respect to the laws of the sport, game formats, player participation and audience enthusiasm

FOREWORD

Cricket is not just a game where a bat hits the ball; it's a game of skill, precision and accurate timing. Players of the sport would know better how difficult it is to put bat on ball. Cricket today is played very differently, not only with respect to the laws of the sport and game formats, but also in terms of player participation and audience enthusiasm. And looking at the number of high-stake tournaments like the IPL being played, the need to perform consistently, win frequently, and the widespread publicity only add to the playing pressure. That is where technology has a major role to play.

Technology has now touched every known aspect of cricket. It has created added interest and fervor for the sport, through the help of online and PC based games. It has also influenced coaching and training through equipment, tactics, even dietary supplements and visual aids. But the direct changes can be seen through the way the game is being presented and broadcast, not only on television, but also streamed live over the Internet.

And to help us understand the finer details of how much technology has affected each sphere of the game, we have experts sharing their views and an inside look at the Mumbai Indians team. Hope you enjoy the new season of the IPL. Happy Reading!

KAMAKSHI S

kamakshi.venugopal@infomedia18.in

"Video analysis has become an integral part of our preparation"

Video analysis has changed the way cricket is being played, and nowhere is this more evident than in the fast bowling department. Mumbai Indians pace spearhead Zaheer Khan tells us how technology has taken cricket to the next level.

BY KAMAKSHI S



Q Do you feel technology has a role to play in cricket? If so what has been the most significant technological innovation you have seen over your playing career?

A Technology has a part to play in the game. For cricketers, the most significant innovation would have to be the introduction of video analysis into the game. This has become an integral part of our preparation, for both batsmen and bowlers. A batsman can study how to play a particular bowler and figure out how to hit him. For a bowler, it exposes the batsmen's weaknesses and we are able to use that to our advantage. Apart from providing intelligence, video analysis is also used for corrective analysis to iron out the flaws in a players' performance.

Q How does it help fast bowlers, for example, improve?

A Dennis Lillee introduced us to corrective video analysis at the MRF speed camp in Chennai. He showed us on the screen how it works and how we can use it to better understand a batsman's game. We also learnt about corrective analysis from him. As fast bowlers, we run in to bowl fast, so we are not aware of the mistakes that creep into our actions. Things like your head falling, feet landing, or even

the arm positioning. These can be identified by studying a bowler's action over a period of time and correcting it accordingly.

Q Do you feel technology has a role to play while training kids?

A I think for children, the most important thing is to have a passion for the game. You should really enjoy playing it. Technology comes in at the age-group tournaments. Once they enter the under-13, under-16 and under-19 tournaments, they will begin to use technology to improve their game. Coaches at that level will use proper training techniques and tools to analyze and improve their game.

Q What about video games, like cricket games for the PC and consoles. Do they help in better understanding the game?

A Video games are helpful, because kids love video games. So that is one way for them to get interested in the sport. However, you really have to be passionate about the sport to become a good player. How far you go depends, to a large extent, on how passionate you are about the sport. Technology and video games are aides. Eventually you have to deliver results on the field.



ZAHEER KHAN

Vice-Captain, Mumbai Indians
Left-Arm Fast Medium Bowler, Right-Handed Batsman

Zaheer Khan joined the Mumbai Indians team in the second season of the IPL. A shift from the Royal Challengers Bangalore team in the first edition, 'Zak' as he is popularly known, could manage only six matches in the second season with the Mumbai Indians thanks to a shoulder injury. With the level of experience he brings with the new ball, the Mumbai Indians will be hoping for a top-of-the-table performance in season three.

Game	M	R	Avg.	SR	HS	50	100	Ct.	Wkt	Eco.	B Avg.	4W	Best
IPL	17	42	8.4	77.77	17*	0	0	3	19	7.92	26.26	0	3/31



© Neha Mithbawkar

Rewind, replay and analyze

With so much cricket being played through the year, it's vital for players to always be prepared. We talk to the experts from Mumbai Indians, and find out how video analysis helps them to gain a competitive edge.

BY KAMAKSHI S

Keeping in mind the high level of competition in international sports, staying updated with the latest trends and technologies is vital. To perform at par with your competitors or outperform them, you need to train your skills and find ways to keep improving. There are ideally two ways to achieve this target. One is to correct, improve and improvise the way you play. The other is to understand the nuances of your opponent's game and use it to your advantage.

VIDEO ANALYSIS: NEED AND APPLICATION

Video analysis is one such tool, which uses video feeds to break down various aspects of a game as may be required. The analysis can be to monitor performance of a player or a team, to monitor techniques for rectification and

modification, or for creating an overall game plan. Thus, video feeds are the source of every bit of information that is required. The key for getting a desired output is using the right software, and within the software, using the best possible template to get the data in a desired format. The videos need not be only the televised feeds alone. Nowadays, each team includes video and performance analysts, who collect data of their own too. And like any other intelligent system, video analysis tools can be effective only if there is a steady flow of data inputs over a considerable period of time.

THE BATSMAN'S POINT OF VIEW:

As a batsman, you need to know which shot to select depending on the ball that has been bowled to you. You cannot take the liberty of waiting till the ball comes to you; the shot has to be decided well in advance. And for a decision like that, you must

keep two important details in mind. One is the field placements, and the other is the pitch of the ball. That can be done by understanding the general field placements for that particular batsman and other similar players. Also, the bowling length and bowling style determined by studying that bowler's past performances can be of great assistance.

On the corrective front, batsmen can get back their form by improving their timing of hitting the ball. They can also make last minute shot changes if they are in complete understanding of the bowler's action and the pitch conditions.

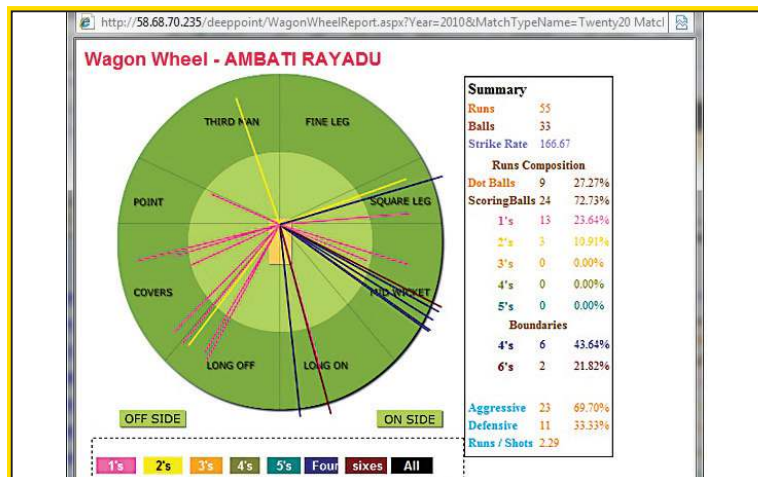
WHAT'S IN IT FOR THE BOWLERS?

In cricket, the bowlers face the crux of the challenge as they not only are entrusted with taking wickets, but also restricting the flow of runs. And keeping this principle in mind, the bowlers stand to benefit the most from performance analysis technologies. Many parameters can be covered under the corrective aspect of video analysis. Apart from checking for and rectifying defective and suspect bowling actions, it also helps them fix issues that arise out of their bowling styles. Fast bowlers

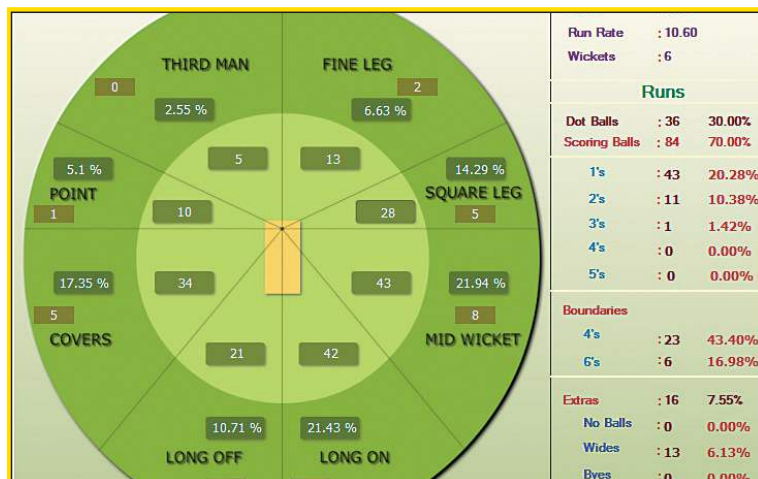
WHAT DOES 'CHUCKING' MEAN?

Chucking is slang to depict that a bowler is flexing his arm more than 15 degrees from the straight position while bowling. Law 24, which is the law relating to no-balls, under Clause 3, defines a fair delivery with respect to bowling action as "A ball is fairly delivered in respect of the arm if, once the bowler's arm has reached the level of the shoulder in the delivery swing, the elbow joint is not straightened partially or completely from that point until the ball has left the hand. This definition shall not debar a bowler from flexing or rotating the wrist in the delivery swing."

The earlier parameters were set at 10 degrees for fast bowlers, 7.5 degrees for medium pacers, and 5 degrees for spin bowlers. Amidst the 2004 Champions Trophy, England, the ICC conducted biometric tests on all bowlers through video footage. They were shocked to discover that ninety-nine percent of all bowlers tested flexed their elbow to some degree, and often higher than the limit set at the time. An expert panel from the ICC has now raised the limit to 15 degrees for all bowlers, irrespective of their bowling styles.



Through various online web portals, you can monitor performance and establish interactions between the player and the coach over the Internet.



A Sector Wagon Wheel depicting the scoring and ball handling pattern of the opposition team over a period of a single match.



You can use both televised and non-televised videos and conduct real time analysis using the features provided by the application.

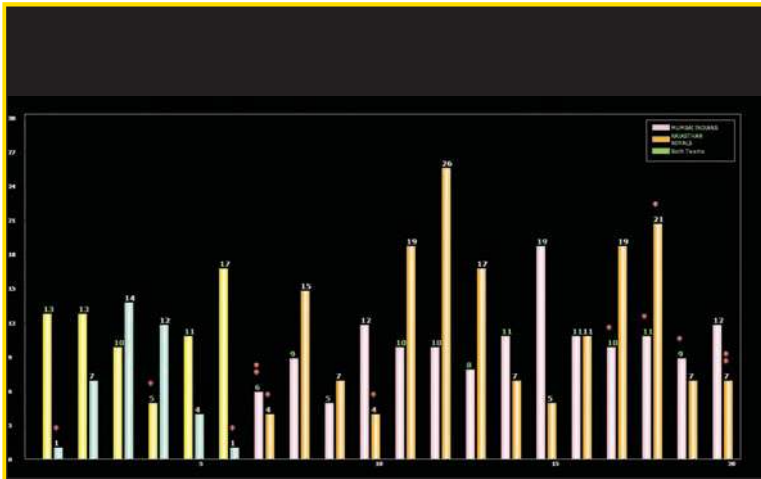
	Mat	In	Runs	Out	Overs	Balls	Wkts	SB	SB %	DB	DB %	Runs / SB	1s	2s	3s	4s
ALI MURTAZA	1	1	46	4	24	1	17	70.83	7	29.17	2.71	8	3	0	0	0
LASITH MALINGA	1	1	22	4	24	2	15	62.5	9	37.5	1.4	11	3	0	0	0
R. SATHISH	1	1	51	3	18	1	15	83.33	3	16.67	25.5	0	0	0	0	0
RYAN MCLAREN	1	1	43	4	24	0	17	70.83	7	29.17	2.41	9	1	0	0	0
SARATH JAYASURIYA	1	1	19	1	6	0	6	100	0	3.17	3	0	0	0	0	0
ZAHID KHAN	1	1	27	4	24	0	15	62.5	9	37.5	1.73	10	2	0	0	0
Grand Total	1	1	208	20	120	4	85	70.83	35	29.17	2.39	47	9	0	0	0

A bowling scorecard, along with a detailed statistical analysis of each bowler from a particular team, can be easily generated through the video data inputs.

Batter	Runs	Balls	Outs	1s	2s	3s	4s	5s	SR
SANATHI JAYASURIYA	23	14	7	2	0	1	3	1	164.29
SACHIN TENDULKAR	17	11	4	3	1	0	3	0	154.55
ADITYA TARE	25	13	6	1	2	0	3	1	176.92
SURABHI TIWARI	50	20	6	17	4	0	4	2	250.00
AMRAT RAYADU	35	20	9	12	3	0	6	2	175.00
R. SATHISH	6	5	2	2	0	0	1	0	120.00
HARSHAN SINGH	8	6	2	2	1	0	1	0	133.33
RYAN MCLAREN	11	5	0	3	0	0	2	0	220.00
LASITH MALINGA									
ALI MURTAZA									
ZAHID KHAN									

Bowler	Ovrs	Maidns	Sum	Wickets	Wides	NoBalls	Econ
DIMITRI MASCARENHAS	4.0	0	24	2	0	0	6.00
SURIN JAI	4.0	0	46	1	19	0	11.50
KAMRAN KHAN	1.0	0	10	0	0	0	10.00
AMIT LINTAL	4.0	0	41	2	2	0	10.25

A complete scorecard for a particular game showing the detailed statistical data of all players can be generated for trend analysis.



Manhattan charts are an excellent tool to calculate over-wise scoring trends and can eventually be used for better game planning.

especially struggle to find a balance between line and length, and also have a tendency to bowl lots of extras. Through the help of various analytical tools, they're action can be mapped to create image and motion-based simulations to not only understand where they falter, but with the help of corrective coaching, they can also fix these issues in good time.

A USEFUL TOOL FOR THE CAPTAIN

The captain can make the most of all the possible data and analysis that can be generated. He can, more importantly, use data regarding batsmen from the opposition and his own bowlers to come up with an array of field placements in advance. This will help as a brainstorming exercise with the team and will also buy him additional time during the crunch overs, helping him keep his over rate in check.

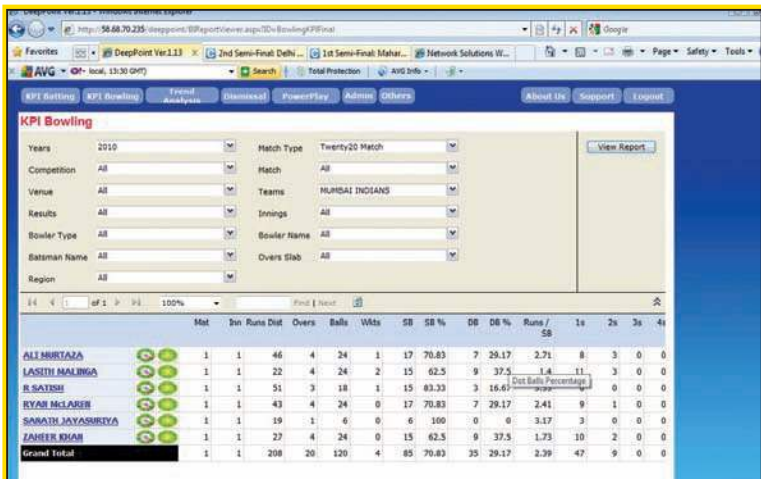
TS Shekhar, the bowling analyst for the Mumbai Indians has been using technology to his advantage since as early as 1988. As for game planning and opposition gazing using technology in cricket, his stand is very clear. "Its neither rocket science, not is it a Russian secret. A lot of batsmen who come in at first are a big hit and by the second year, everyone knows exactly what their weaknesses and strengths are," he says. He further adds, "Analysis tools help opponents and the home team to go by the bowling and batting trends to tell you what kind of score is safe to play with, or what the score will be at the end of 20 overs or 50 overs."

HELP FOR THE COACH

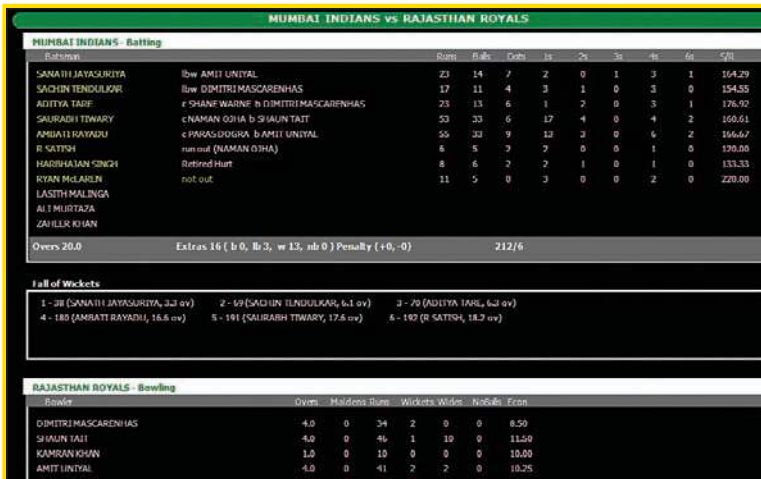
The coach has, by far, the most stressful job of all. It is his responsibility to implement the corrective measures and also help the captain with the gameplan and field placements. A coach can record a batsman or bowler's practice sessions over time and point out kinks in his technique, and suggest options to iron them out. Moreover, with the help of all the collated data, a coach can plan more fruitful practice games by selecting the best batsman-versus-bowler combination to make the best use of all his resources.

About applications of biomechanics in a sport like cricket, Shekhar says, "I use SiliconCoach, which gives a different perspective to coaching, because you can always forward and rewind the bowler's action. You can find exactly where his mistakes are and you can create a library of his bowling. It helps bowlers hone their skills and maybe even help improve their techniques".

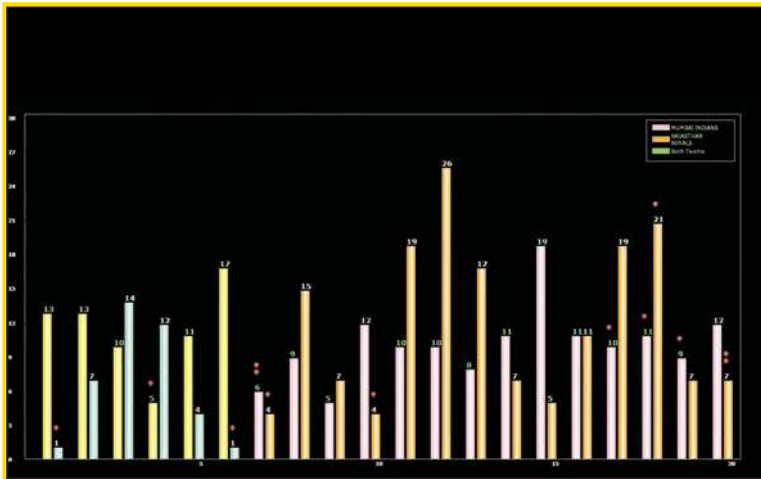
Screenshots Courtesy: CKM Dhananjai



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Screenshots Courtesy: CKM Dhananjai

AN AID FOR PHYSIOTHERAPISTS AND PSYCHOLOGISTS

When a player has been playing relentlessly or has come back from a break, his form (for batsmen) or action (for bowlers) usually suffers. Physical sports put your body under a lot of exertion, and if you don't keep your techniques in check, you are opening yourself up to a risk of injuries. A physiotherapist can use video analysis to monitor player techniques, and if injured while playing, identify the reason of the injury. Based on various inputs, the physiotherapist and the fielding coach can devise appropriate warm up techniques, effective exercises, and a better fitness regime.

With so much cricket being played these days, a drop in form may be very a depressing and frustrating period in a player's career. A strong psychological support system within the team is very essential. Shekhar further elucidates the usefulness of video analysis as a motivational tool apart from a corrective and innovative device, saying, "If a player fails for five or six innings, we show him his in-form past performances to bring him out of depression".

THE EQUIPMENT

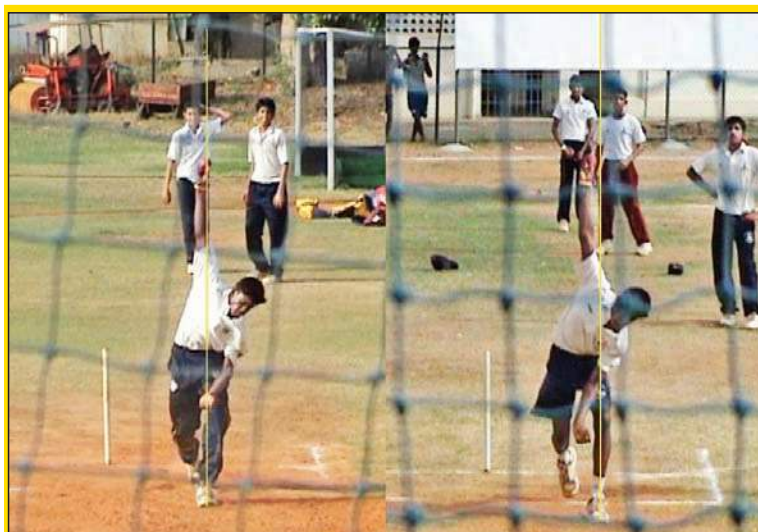
In the days when recording practice sessions was a difficult ask, Video Cassette Recorder (VCR) systems were used extensively for recording match feeds. Today, apart from attainable telecast feeds (that too using various on-field camera angles) are easily attainable. But to capture shots of the practice sessions, one or many MiniDV cameras are put to use. These are connected to laptops, usually two, where one is occupied by the video analyst and another by the coach. The key is the software, which uses the captured video as an input feed and gives out intelligent analysis in a template that suits the coach best. Some software support exporting the analyzed clips to portable devices like an iPod or PSP so that players can review their own performances while on the go.

NO SURPRISES LEFT?

No matter how much analysis is done to develop a gameplan to break the opposition, surprises are a part of the game. When asked about it, Shekhar's face instantly lights up! He says, "You can more or less zero down to a batsman; to what his strengths or weaknesses are. Sachin (Tendulkar) is one player who can make everybody look like a fool. He is a genius. To me, Sachin is one in a century. He can always topple your plans!"



Bowling analysis is more effective if the statistical data is backed by visual images showing where the balls have been pitched.



Applications like SiliconCoach use video inputs which can be shown to a player at regular intervals so that the kinks in his game can be ironed out.

The competitive edge

Twenty20 is the most explosive version of cricket, and winning consistently is a difficult task. Mumbai Indians video analyst CKM Dhananjai tells how video analysis helps players stay in form and on top of the opposition.

BY GAGAN GUPTA



© Neha Mithbawkar

CKM DHANANJAI
Video Analyst, Mumbai Indians

CKM Dhananjai is the video analyst for the Mumbai Indians. He captures information from video and other inputs, and converts them into intelligence which is used for team strategizing. Dhananjai is also a representative of Sports Mechanics, a sports technology firm known for providing value-added services, and for implementing sports e-learning projects. Dhananjai has been a part of Mumbai Indians since the very first season, saying he "loves the city, its identity and intensity." Apart from the IPL, he has been a part of the International Cricket Council's (ICC) High Performance Program in 2005. He has trained coaches on use of technology for the ICC HPP, Asian Cricket Council, MRF Pace Foundation and the National Cricket Academy. He has been the performance analyst for the Indian cricket team since 2007.

Q What is performance analysis and how does it help players?

A Performance analysis, on a broader concept, is the tracking of players on a daily basis to ensure that the small changes that creep into their techniques is shown to the coaches and monitored properly. Video analysis is analyzing body movements on one hand, and analyzing performance on the other hand. This technology is not limited to cricket alone, and is widely used in a host of international sports, like badminton, boxing, and squash, to name a few.

Q What really happens in a video analysis of, say, a bowler or a batsman?

A What we do is track the performance of the player by capturing video feeds. My role is to actually track every ball in every match and training session of the players. This video feed can either be a camcorder that we set up during training sessions, or the live telecast feed from the matches themselves. All the player data is collected over a period of time. This enables us to identify changes in action or body position that could result in a loss of form. We then inform the coaches about it, so they can take suitable remedial action. In many cases, video analysis also helps identify inherent flaws in a player and helps rectify those as well. When this video analysis is overlaid with match data or stats, we can identify exactly where the player is going wrong. Our job is to help identify the flaws; the coaches then take corrective action.

Q What do you use to analyze players' performance?

A Mostly camcorders and live match feeds to record video. We then use software like Twenty20 Pro and Silicon Coach, which provide the data points out of the video. The whole idea is to gain intelligence out of it and to create an accelerated learning environment. So if a player takes 10 days to correct a flaw, with performance analysis, it can be much shorter.


Q Does performance analysis play a part during the match itself?

A Yes it does. We are gathering information in real time. A laptop is set up for the coaches, who get real-time feedback from the match. They use this to plan strategies. This is called match analysis and is an integral part of every international team.

Q What kind of information is available to the coaches during the match?

A Well, a whole range of data points is made available to the coaches. Twenty20 Pro, for example, can give information on batting and bowling patterns. Number of dot balls, when did the batsmen defend, when the ball was pitched up, pitched short etc, number of boundaries and where the batsman hit them, what kind of balls were hit, and so on. So any number of data points is available for the coaches to analyze and interpret.

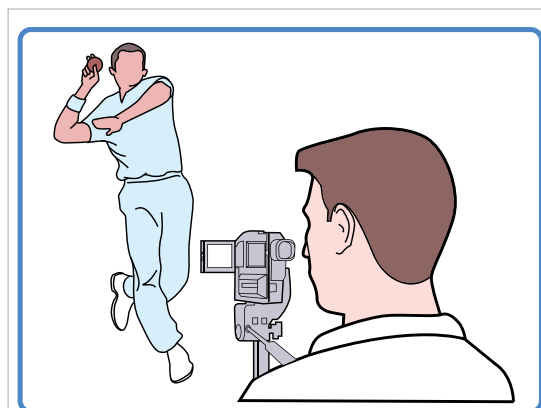
Q How useful is this technology for kids, who are just starting out as sports persons? Would you recommend that their parents/coaches use this to help build a great technique at the start?

A Technology awareness is growing in sports. People are now starting to use cameras and laptops for all sports; not just cricket. You will also see that people are beginning to embrace technology at the grass roots level. It is a very simple tool, but the effects are powerful. Just like the role of the physiotherapist has evolved in sport, the role of the performance analyst is also evolving. This technology is already used in age-group tournaments and yes, it will have a tremendous impact if coaches begin using it at the training stage. This is happening slowly. 

APPLICATIONS USED FOR SPORTS ANALYSIS

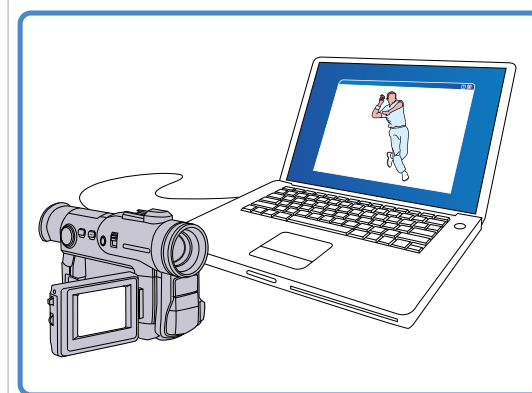
Here is a list of video-based analysis tools for sports that can be used in cricket too:

- ▶ **Dartfish:** A tool reaching out even at the grass roots levels of cricket training
- ▶ **SiliconCoach Pro:** A high-profile analysis tool which can be clubbed with other tools to give a 360-degree view of a player's performance
- ▶ **Twenty20 Pro:** A tool specifically catering to the shortest version of the game
- ▶ **MotionPro:** Software ideally used for sports involving swing analysis and motion analysis
- ▶ **Kinovea:** An open source video analysis application, which is almost on par with any of its paid counterparts



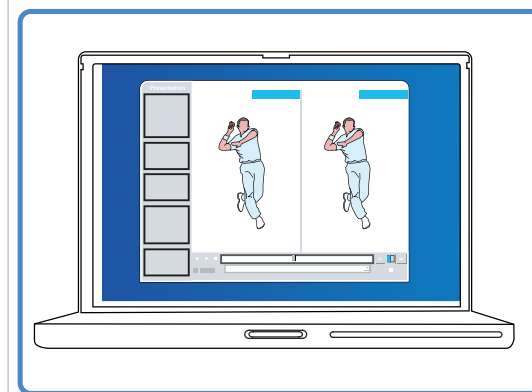
CAPTURE DATA INPUTS

The best device to capture the player in practice or during a match is a MiniDV video camera.



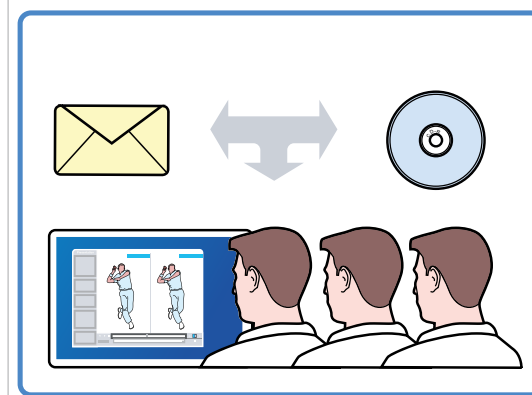
SAVE AND REVIEW

Once you have your videos collated, you need to convert the standard video of 25 images per second to 50 images per second for accurate an in-depth analysis.



EVALUATE AND ANALYZE

Once you have the video ready for analysis, run it through an analysis tool of your choice for refined and usable data outputs.



CREATE AND SHARE

Most applications provide with a number of templates to come up with a range of analyzed data which can then be shared with the players.

 Sachin Pandit



Wow! There he is! The Sachin Tendulkar.
I can't believe it's him!



The Mumbai lads plotting the
next opposition's demise

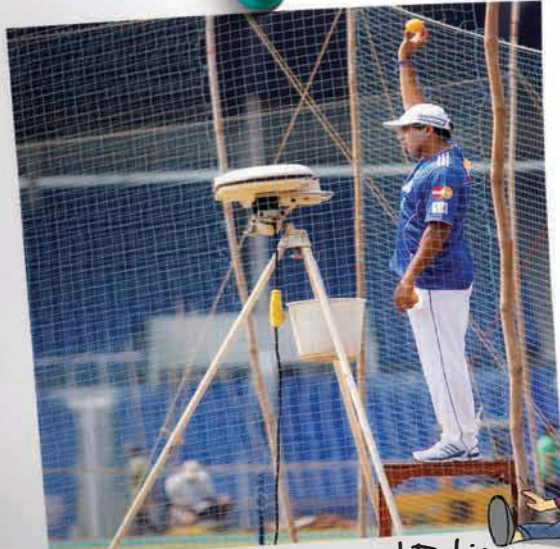


Sure hope Bhajji hits big
knocks this season

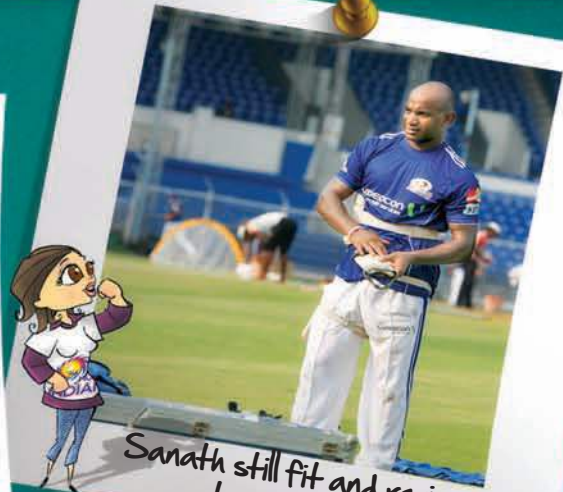


Lessons in strokeplay
from Robin Singh, the coach





That sure is fast and scary! Robin Singh is in the safest place to be



Sanath still fit and raring to go at 40

BEHIND THE SCENES



Aditya Tare looks a lot like Sachin. Let's hope he hits the ball just as well!



Mumbai's fiery opening bowler now minus the gold streaks





Did you know? How player rankings work

Cricket rankings are as closely followed as the game itself. With India making it to the top of the table, and several of the Men in Blue consistently making it to the top ten, here's a general overview of how exactly individual ICC player rankings are calculated.

BY KAMAKSHI S

Top 10 Batsmen - Test				Top 10 Bowlers - Test			
ID	Rat.	Name	Nat.	ID	Rat.	Name	Nat.
1	863	V. Sehwag		1	867	D.W. Steyn	
2	842	H.M. Amla		2	780	M.G. Johnson	
3	836	D.P.M.D. Jayawardena		3	757	Mohammad Asif	
4	835	K.C. Sangakkara		4	752	M. Muralidaran	
5	824	G. Gambhir		5	732	G.P. Swann	
6	805	M.J. Clarke		6	729	Zaheer Khan	
6	805	S.R. Tendulkar		7	712	Harbhajan Singh	
8	790	J.H. Kallis		8	673	S.C.J. Broad	
9	786	G.C. Smith		9	668	S.R. Clark	
10	783	R.T. Ponting		10	660	M. Morkel	
Top 100				Top 100			

Top 10 Batsmen - ODI				Top 10 Bowlers - ODI			
ID	Rat.	Name	Nat.	ID	Rat.	Name	Nat.
1	819	M.S. Dhoni		1	762	D.L. Vettori	
2	814	M.E.K. Hussey		2	722	R.W. Price	
3	785	A.B. de Villiers		3	711	Shahid Al Hasan	
4	762	S.R. Tendulkar		4	682	K.M.D.N. Kulasekara	
5	742	C.H. Gavle		5	668	K.D. Mills	
6	727	R.T. Ponting		6	656	S.E. Bond	
7	718	G.C. Smith		7	645	Harbhajan Singh	
8	715	S. Chandrapaul		8	640	D.W. Steyn	
9	713	J.H. Kallis		9	639	Shahid Afridi	
10	701	K.C. Sangakkara		9	639	J.D.P. Oram	

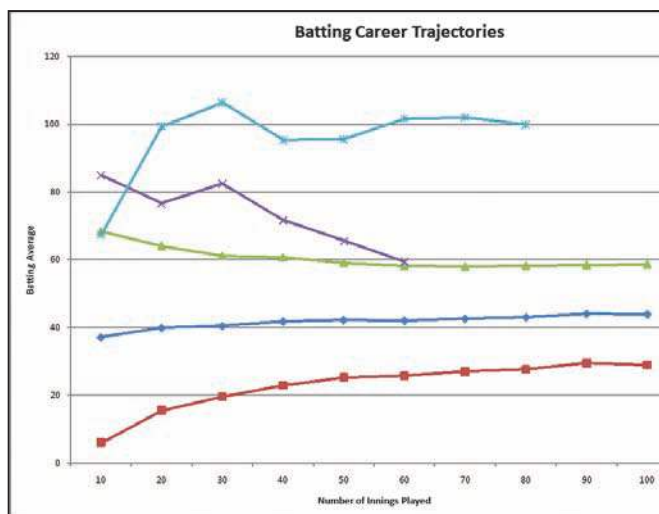
ABOUT THE RANKING SYSTEM

There are several types of rankings in cricket. Some of them consider Test and One-Day cricket as two separate entities, while others cohesively consider performances in both forms of the game to rate a player. A ranking system scores over simple batting or bowling average calculations because it also takes into account several other factors, like strength of the opponent, fielding efforts, etc. Of the popular ranking systems, the ICC Player Rankings, endorsed by the International Cricket Council (ICC), is the most widely followed. The system was developed at the suggestion of Ted Dexter in 1987 to better understand a player's standing beyond standard averages. ICC ODI Rankings were introduced in 1998.

PARAMETERS CONSIDERED FOR RANKING

The rating scale lies between 0 and 1,000 points. Every fresh record or improved performance will increase a player's points tally, and vice versa. The calculation of points is not manual, and there are several parameters to be considered while ranking any player. Preset algorithms carry out multiple calculations based on various situations of the game. Physical factors such as the pitch quality are not considered; the data for ratings is picked up from match scorecards. Special consideration is given to players with a strong and consistent track record, as well as to new players.





TEST RANKINGS FOR BATSMEN

Factors that are taken into account while calculating a batsman's Test rank include the following:

- ▶ Number of runs scored.
- ▶ Ratings assigned to the opposition bowling attack (stronger the attack, higher the points)
- ▶ Level of scoring in a match. The batsmen contributing more to the team total will get higher points.
- ▶ Wicket status (a 'not out' innings earns bonus points).
- ▶ Match results (high scoring batsmen on the winning side gets more points). A victory against a side like Australia or South Africa will earn a better bonus over a team like Kenya or Zimbabwe.

TEST RANKINGS FOR BOWLERS

Factors that are taken into account while calculating a bowler's rank include the following:

- ▶ Number of wickets taken and total runs conceded.
- ▶ Ratings of the dismissed batsmen (better the batsman, higher the points)
- ▶ Number of overs bowled in a game.
- ▶ Good figures in a high scoring match yield more points.
- ▶ Match results (a high wicket-taker on the winning side gets more points). A victory against a better rated team merits a higher bonus.
- ▶ Bowlers not bowling in a high-scoring Test are penalized.
- ▶ Players missing a Test match lose 1% of their points.



ODI RANKINGS

The ICC Rankings for One-Day International players follow similar principles as those in the Test Rankings, with slight differences, keeping the pace and duration of the game in mind. Some of these key differences are:

- ▶ Batsmen stand to earn better bonuses for quick scoring.
- ▶ The wicket status (out/not out) is not as relevant in ODIs.
- ▶ Big scores against weak teams does not earn too many points
- ▶ World Cup and other ICC tournament match performances earn higher credit.
- ▶ Players missing an ODI lose 0.5% of their points.
- ▶ Good bowling economy earns high credits even if no wickets are taken.

Getting a headstart

Former Indian Test cricketer Aakash Chopra tells us the importance of correct coaching and the right attitude in aspiring cricketers

BY KAMAKSHI S

Q Is it easier to get into an 'A' league team now than it was five years back?

A It is definitely not easier now as cricket is the numero uno sport. It is a long process; there is no set formula that works. The only way is to be talented, reach the right people, and be coached. Without a good platform to perform, it is as good as not having any talent. A diamond is a diamond only after it has been cut. An uncut diamond is just a stone, which is not beautiful. That's the case with any young kid, who may be talented, but he needs to be nurtured. He needs to be coached by a good coach, facilities should be provided to him to train properly. Then keep your fingers crossed. Luck has a very big role to play as well.

Q How early should the training process start?

A The age has come down drastically. When I started playing, you couldn't imagine playing before the age of 12 or 13. But these days, kids are starting as early as six and seven. But one needs to know that the child should be big enough to hold a bat. And if anyone that young is being trained, he should be allowed to do what he wants and what he does best, rather than forcing things down his throat.

Q If a child is not old enough to join a coaching academy, what does a parent need to keep in mind?

A What you see on the Internet is just a fraction of the coaching academies. There are several

academies that take kids as young as six or seven. You eventually have to go to a place where a lot of kids are playing cricket, because that's how you develop skills like team spirit and competitiveness. Although there are no alternate ways to speed up the process, you can be particular about how your kids train, what they eat, and ensure that they have support available, especially psychological help, because it is something really relevant these days.

Q How should parents help their child cope with failures of non-performance?

A I personally believe that it is extremely important to prepare your child. Most of the time, kids are under tremendous pressure, whether it's peer pressure, parental pressure, or just the pressure to perform. But they need someone to tell them that it's not the end of the world if you fail. The essence of any sport is that, while the aim is to succeed, you may fail even when it's not your fault. Parents need to be mature enough and proper psychological support is required.

Q Can video games help him hone his skills?

A There are things you can improve upon; you can do things to increase a child's concentration. You can use exercises, you can use games like table tennis to get good hand-eye coordination and ball sense as well. Your reflexes do become sharper if you play certain games, but I don't think it has further benefit than that. You have to go to the ground to take it further.



AAKASH CHOPRA
Former Test Cricketer, India

Aakash Chopra opened for India in 10 Tests, forming a potent all-Delhi combination with Virender Sehwag during India's tour of Australia in 2003-04. He also made his mark as India's last exceptional close-in fielder. He is one of the more articulate Indian cricketers, and writes columns for Hindustan Times and Cricinfo. Beyond the Blues, his season diary for 2007-08, Delhi's championship season, was released last year.

Q Can more technology be introduced at coaching centers?

A We can use the Internet to spread information. People need to have access to experts. There is a need for high quality visual coaching manuals, which are not very easily available. Technology is, however, more helpful for professional cricketers, not toddlers. Once out there, it becomes a very helpful tool. You can record videos and then analyze them. There are applications like Silicon Coach available, wherein you can break down the entire innings in terms of the bowling speed, delivery areas, how they were bowled, and their mistakes. I personally endorse the use of technology in cricket, but not at the training level, where people don't really know how to use the technology properly. Then it can become a hindrance. ❌



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Best free cricket games

Cricket is India's favorite pastime. Some of us play it, most of us watch it, and all of us discuss it. Here are 10 cricket games that you can play on your PC or mobile phone. Use them to practice, sharpen your knowledge of the game, or to simply get your virtual cricketing fix.

BY KAMAKSHI S

1 STICK CRICKET

IF you're looking for a way to improve your ability to read the ball or better your shot selection, then this online training game is a must-play. You can play a practice match or a full-fledged game as per your convenience. As a bowler, the training mode teaches you an array of standard bowling styles, while with the bat, it helps you with your timing as well as shot selection. If you wish to manage your progress and save your scores and stats, you can register with the website free of cost. You can also play full games under the Slog, World Domination, Head2Head, World T2 and Premiere League modes. For details, visit www.sticksports.com/cricket/gametraining.php

2 NPOWER CRICKET GAME

THE nPower Cricket Game, from the nPower Test Series website, is yet another game designed to help you hone your batting skills. The object of this Flash-based game is to amass as many runs as possible in the allotted 12 overs. The game ends once your 12 overs have been bowled, or once all 10 wickets have fallen. You can register with the website free of cost to save your scores and compete with other players for the top spot. For details, visit http://cricket.npower.com/web/play_the_cricket_game/index.htm

3 SLOGOUT!

ANOTHER game that helps you to test your 'slog over' skills, this particular online game from CricInfo.com comes in two variants. Apart from 'Just Slogout!', you can also play 'Slogout Classic!', which, unlike the former, lets you play

5-over, 10-over, 15-over or 20-over games with teams of your choice. You can play at Easy, Medium or Hard difficulty modes depending on your proficiency with the game. You can also save your scores by registering with the website for free. For details, visit <http://slogout.cricinfo.com>

4 SUPER SIXES

THIS one is all about playing in the death overs! Practice and perfect your big-hitting skills as you aim to position your batsmen in the ideal stance to hit the ball over the fence. The game is more like a practice session, where you have four overs to set your batsman's position and attempt to build a big score with as many maximums as possible. You can register with the website for free to save your innings scores. For details, visit www.gamesjockey.com/play-1819-Super-Sixers.html

5 BODYLINE

A bit of a brutal game, but a very effective way to learn precision bowling by aiming at a target. You won't find much of an emphasis on bowling styles here though. Inspired by the infamous Bodyline series between Australia and England, the aim of the game is to injure the batsmen thrice to get them out. Press the [Spacebar] once to set the vertical bowling line, and then again on the horizontal line to choose your delivery length. You will receive additional power if you hit your target thrice in a row. For details, visit www.games2win.com/en/cricket/play-bodyline.asp. If you do want to try out different bowling styles, the 'EA Cricket' series of games are a more viable option.



Sachin Pandit

6 GULLY CRICKET

NOW this is one game you can play whether you know the rules of the game or not. Gully Cricket has four levels set in different locations that you must clear, and each level has a set target that you must achieve. Hitting three boundaries in a row earns you the title of 'supper hitter', while hitting the people around you earns you additional bonus points. And when in a fight, keep hitting the [Spacebar] to win it, or get beaten up! For details, visit www.games2win.com/en/cricket/play-gully_cricket.asp

7 ULTIMATE FIELDER

CRICKET is not all about batting and bowling; fielding is just as important. And not all cricket games need you to play on a PC. Ultimate Fielder is a JAVA-based mobile game. The game helps you aim for the stumps from a variety of angles and distances to better your fielding skills. However, you'll need an active GPRS connection for this game to work on your smartphone. The game is free to use and can be installed quite easily, but you'll have to register at the website to download a copy. For details, visit www.hovr.com/games/Ultimate_Fielder.aspx

8 FANTASY CRICKET


IF it's cricket management that excites you more than the on-field action, then Fantasy Cricket is just the game for you. You can choose players from ongoing matches, but you can select only 6 members from each of the countries in one of the three listed combinations. You receive an allotment of 10,00,000

points to spend on your players and team. You can also use the random team creator to start with a default team to get right into the action. Compete with your friends and amass as many points as possible as your chosen players do the work on-field. For details, visit <http://fantasy.cricinfo.com>

9 CRICKET TRIVIA:

IF you want to test your cricket knowledge on your mobile phone, all you need is a GPRS connection and the 'Cricket Trivia' game. The game has over 250 different questions. These are arranged in mini games like 'Quick 1', 'Quick 10' and 'Quick 20', in which, you're required to answer the selected number of questions. 'Time Attack 10', 'Time Attack 30', and 'Time Attack 60' require you to answer as many questions as possible in the set time. 'Survival 1 Life', 'Survival 2 Lives' and 'Survival 3 Lives' require you to survive by giving as few incorrect answers as possible. Finally, the 'Endurance' mode is a mixed bag of quiz questions. For details, visit www.hovr.com/games/Cricket_Trivia.aspx

10 SO YOU THINK YOU KNOW CRICKET

A self-proclaimed 'Ultimate Cricket Quiz', the website is a great way to test your cricket knowledge. And if you happen to live in England, reaching level 2 of the game ensures several goodies. What makes the site lively and interactive is the ability to share your cricket trivia with the world by adding your own questions. To do so, you'll need to be a registered user on the website. For details, visit <http://www.soyouthinkyouknowcricket.com/> 



ASHES

CRICKET 2009

Ashes Cricket 2009 is a fantastic offering in Codemasters' long list of cricket titles. The game has everything that a loyal cricket fan would look for, and acts as a fitting tribute to the legendary England-Australia rivalry that was ignited in 1882. The game has done well to portray players in a very realistic form, with great attention to detail, accurate likenesses, names and sponsors. This gives the player the feel of being part of a real match. Even the player animations are quite well done, and resemble actual player movements. To top it off, Ashes Cricket 2009 has some good analytical tools to help you learn how well you've performed all through a series. In addition, the game has extremely high quality graphics that brings to life even tiny details like crowd movements and reactions, as well as the finely-cut turf that spans the field.

Game modes

The game focuses more on the Test match aspect of the sport, but it also gives a great deal of importance to the whole concept of One-day International cricket. Besides the usual Ashes series, you also have the

option to choose from 12 international teams. The five-day matches may seem a bit too tedious for a player to keep up with, but the game gives you the option to either play it in full, or in a shorter format with fewer overs per day. However, you can make the most of the One-day matches that come in both 50-over and 20-over renditions. The latter, of course, relies on quick scoring and implements the unique rules of the T20 game.

Gameplay

Bowling has always been considered easier in games simulating the 'gentleman's sport'. Ashes Cricket 2009 has a simplified bowling module that is instantly familiar to those who have been playing cricket games for a while. Define your line and length while the bowler covers his run-up and specify the swing and pace of the ball with precision timing just before the ball is delivered. The accuracy meter will help you gauge the quality of each delivery. In a few dozen overs, you will learn the newer aspects of the game and also about the narrow margin of error between the perfect delivery and a no-ball. The deception module also works to some extent, in which, you begin your run-up by aiming at one point on the pitch, but end up bowling it in a totally different location. This works well even in single-player mode against the computer-controlled opposition.

The confidence of the players also increases with each good delivery, and is raised even more with each wicket. However, being smashed for a four or six can adversely affect the player's confidence levels, and you may notice deliveries swinging out of control and all over the place. Even the number of delivery options will start reducing as your confidence level dips below a certain point. Make sure that you have players bowling in short spells. This helps them maintain their stamina and keep performing optimally. You can even pick which end you would like a bowler to run in from.




Batting feels just as realistic as bowling does. It's all about timing, but you will only be able to master the art with some trial and error and lots of practice. Without the correct timing, you will end up playing a stroke early and risk your shots being misdirected, or worse, playing too early or late can get you caught out. You'll need to keep in mind that different bowlers will use different tactics to set you up and get you out. Another important factor in stroke play is getting your footwork right while playing a shot. You can move around, and choose between front or back foot stances depending on the delivery. Make sure you time your running between the wickets well enough, else you will notice both the batsmen running in the same direction. This is mainly because the agility of players varies between different players.

Fielding is a bit of a problem in the game. You cannot control fielders as they pursue the ball or run around to take a catch. The fielding is mostly computer-controlled, and it doesn't work too well. Also, instead of getting rid of the ball quickly, most fielders idle around with the ball after picking it up, thus missing out on the some run-out opportunities. Players have real-world tech like Hawk-Eye in the game to analyze deliveries and verify the accuracy of the umpire's decision. Playing through matches and the various tournaments helps unlock new features. The multi-player module is fantastic and setting up a connection doesn't take too much time or patience. The only

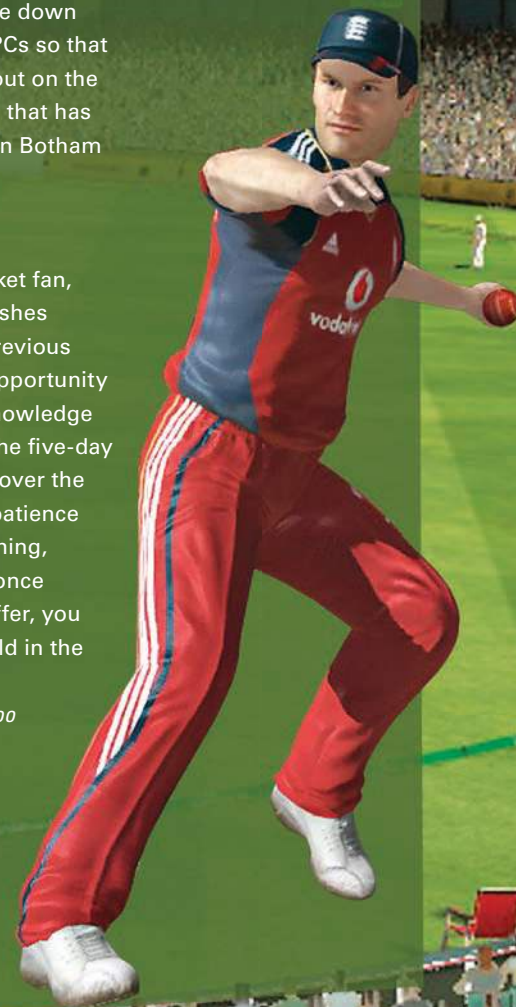
problem is that only Australia and England have licensed player names and brandings. Players from other teams are given some amazingly innovative names to reference the real players they represent.

The game's controls are similar to those of EA's popular cricket games, and the crowds are lively and react accurately to on-field events. While the game supports a maximum resolution of 1900x1200, you can tone down the graphical details for lower-spec PCs so that gameplay isn't affected. Don't miss out on the exciting training module of the game that has the voices of Shane Warne and Sir Ian Botham guiding you.

Verdict

This is a great game for the avid cricket fan, who can't get enough of the sport. Ashes Cricket 2009 has a lot to offer over previous cricket games, and it gives you the opportunity to put all your cricketing skills and knowledge of techniques into practice. Playing the five-day Test matches increases your control over the players and effectively conveys the patience and strategy that goes into the real thing, thus, teaching you as you play. And once you've learned all the game has to offer, you can challenge others around the world in the game's multi-player modes. 





— Gareth Mankoo






Platform: PlayStation 3, Xbox 360, Nintendo Wii, PC

Released: August 19, 2009

Developed: Transmission Games/Codemasters

 **Intel Processor:** Core 2 Duo E6420 2.13GHz
  **AMD Processor:** Athlon 64 X2 Dual Core 4000+
  **Nvidia Graphics Card:** Geforce 7900 GTX
  **ATI Graphics Card:** Radeon X1900 Series

 **RAM Memory:** 1 GB
  **Hard Disk Space:** 2.5 GB
  **DirectX:** 9.0


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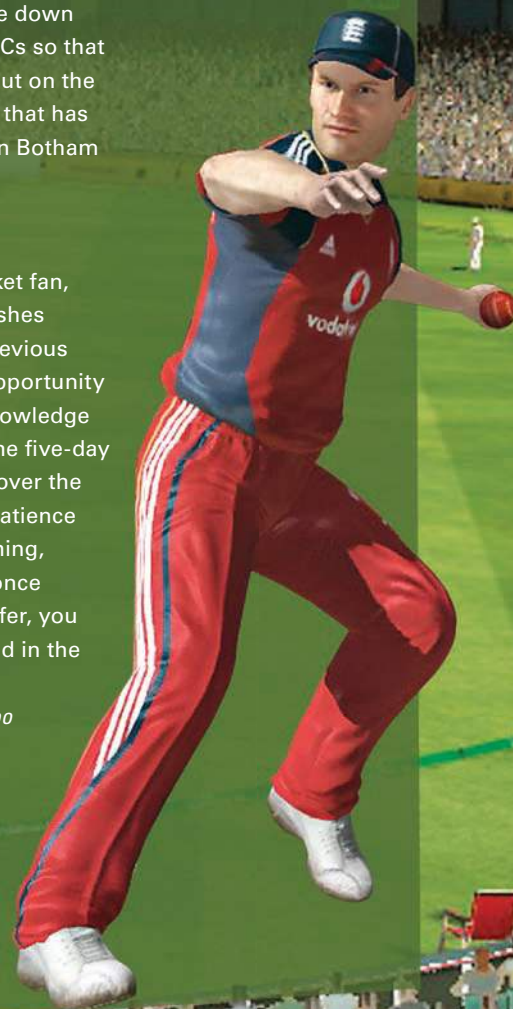
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Make you own cricket scorecards

Local matches are played with as much fervor as international games, and it is all the more difficult to keep score for such matches. But with a little help from MS Excel 2007, you can do so with absolute ease!

BY KAMAKSHI S

KEY DETAILS

SKILL LEVEL

****☆

Intermediate

WHAT YOU WILL NEED

◆ Excel 2007

WHAT YOU CAN LEARN

◆ Creating personalized scorecards

HOW LONG IT WILL TAKE

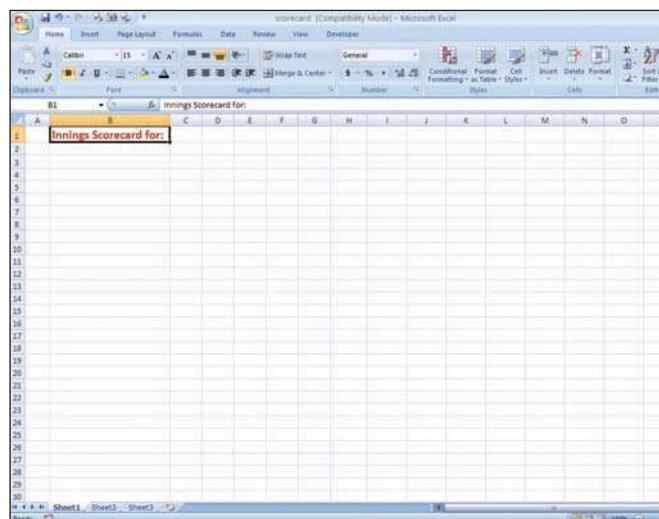
60 Minutes

STEP 1

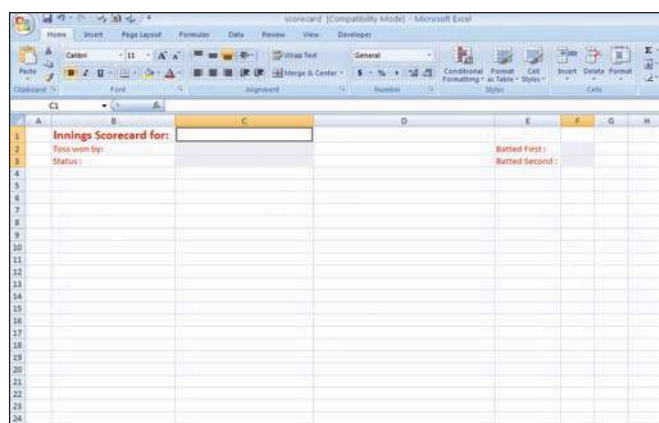
CREATING THE BATTING SCORE CARD

THE batting score card usually has all the details regarding an innings of the team, and so you need to plan the batting scorecards well. To start off, carry out the following steps:

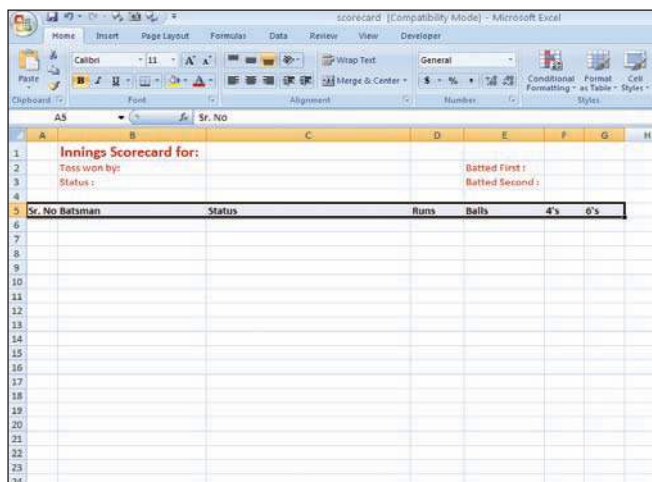
1. First you need to indicate the team details for which the scorecard is. In cell B1, type the text 'Innings Scorecard for:' and set the font color to 'dark red'.
2. Set the font size at '15' from the drop-down list appearing under the 'Font' section of the 'Home' tab.
3. Select cells B1 and C1. Click the 'Bold' button from the 'Font' section.
4. Set the column width as per your requirement.



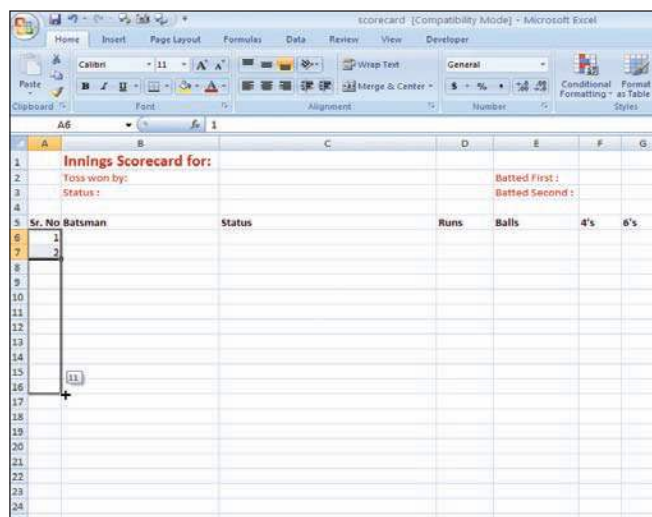
1. In B2, type 'Toss won by:'. In cell B3, type 'Status:'.
2. In cell E2, type 'Batted First:' followed by 'Batted Second:' in cell E3.
3. Select the four cells and change the cell color to 'dark red'.
4. Select cells C1, C2, C3, F2, and F3. Click the 'Bold' button from the 'Font' section of the 'Home' tab.



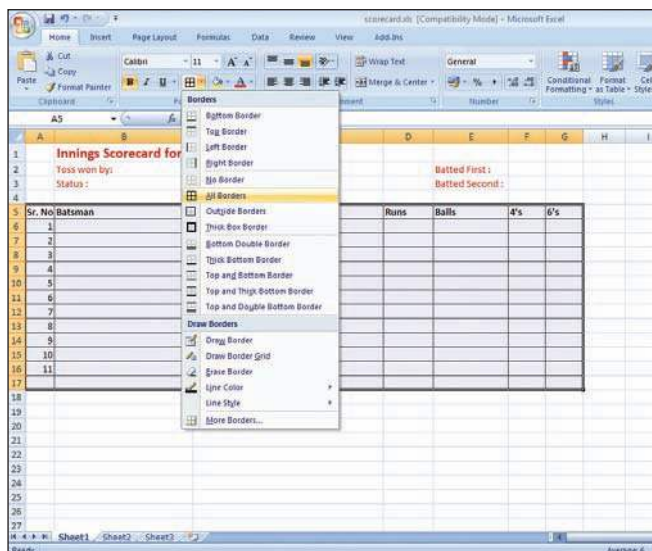
5. Type the following text values in each cell starting from cell A5, up to cell G5 as 'Sr. No', 'Batsman', 'Status', 'Runs', 'Balls', '4s' and '6s'.
6. Select cells 'A5:G5' and click the 'Bold' button from the 'Font' section of the 'Home' tab.



7. Type '1' in cell A6 and '2' in cell A7.
8. Select both cells and drag the fill handle to reach '11' in the linear series.



9. Type 'Extras' in cell A17 and 'Total' in cell C17
10. Select A5:G17.
11. Select the 'All Borders' option from the 'Borders' drop-down of the button from the 'Font' section of the 'Home' tab.



CHIP PLUS TIP

MAKING SCORECARDS ONLINE

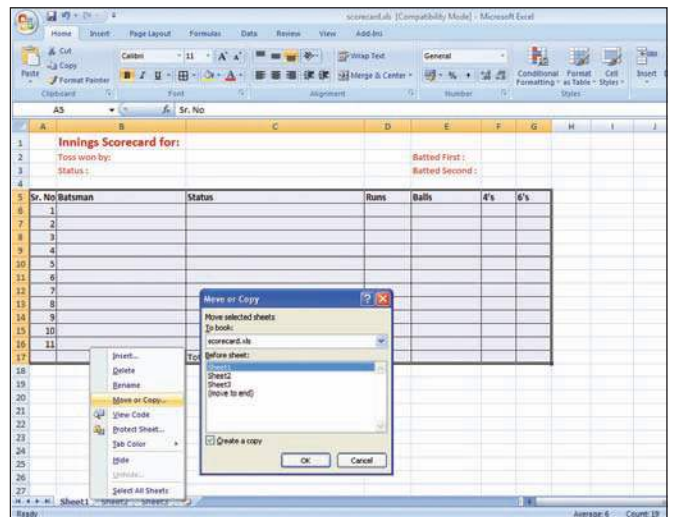
You can take an Excel based scorecard online using tools like ThinkFree online and Google Spreadsheets. Google Docs enables you to use complex functions such as =COUNTIF() as well as simple functions such as =COUNT(), =SUM(), and also supports 3D referencing. What this means is that you can create online scorecards and publish them in real time ether on your blog or website, that too using no complex techniques or tools!

CHIP PLUS TIP**AUTOMATING SCORE UPDATES**

If you plan to use these score cards online, you can use 3D referencing or cross-sheet referencing to automate most of your tasks. The sheet name should correspond to the player's name on the main scorecard. To do so, carry out the following steps:

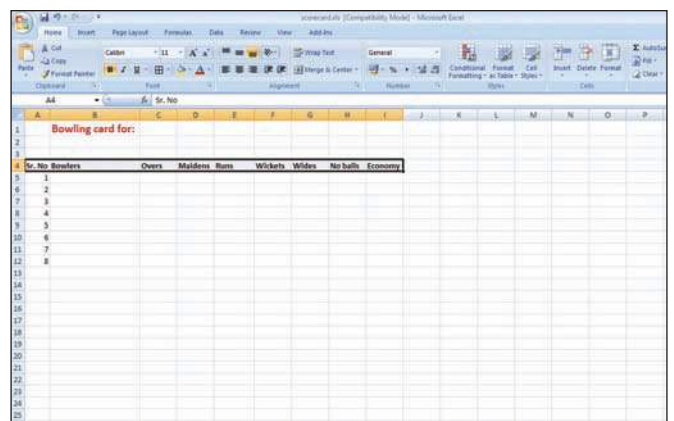
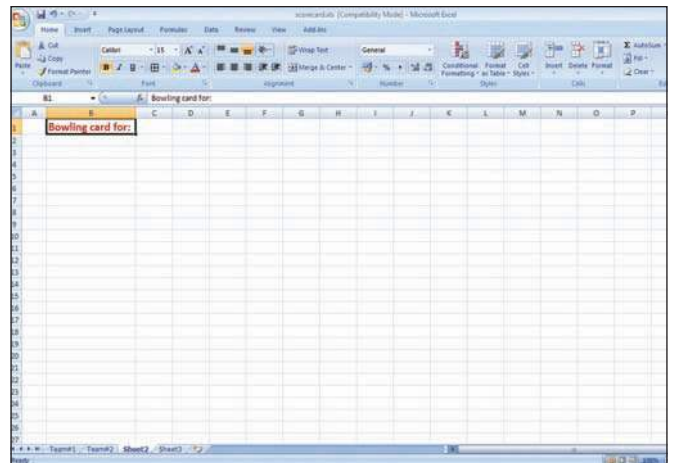
- [1] For calculating balls played, type the formula in the respective column as =COUNT(Batsman!B4:P53).
- [2] For calculating boundaries, type the formula in the respective column as =COUNTIF(Batsman!B4:P53, "4").
- [3] For calculating sixes, type the formula in the respective column as =COUNTIF(Batsman!B4:P53, "6").
- [4] For the total runs scored, type the formula in the 'Total' column of the 'Batsman' sheet as =SUM(B4:P4). Back in the main scorecard, type the formula in the respective column as =SUM(Batsman!Q4:Q53).
- [5] For the extras on the bowling card, type the formula in the respective column as =Bowlers!E16 and =Bowlers!E17. In the corresponding batting card, type the formula as =SUM('Bowl Team#2'!G5:H12)
- [6] For the batting card total, type the formula in the respective column as =SUM(D6:D16,B17)

12. To create a score card for the second team, right-click on the 'Sheet1' sheet tab.
13. Select the 'Sheet2' option in the 'Move or Copy' dialog box.
14. Check the 'Create a copy' option. Click 'OK' to continue.
15. Right-click on each sheet on at a time. Select 'Rename' and type the team name to identify the sheets better.

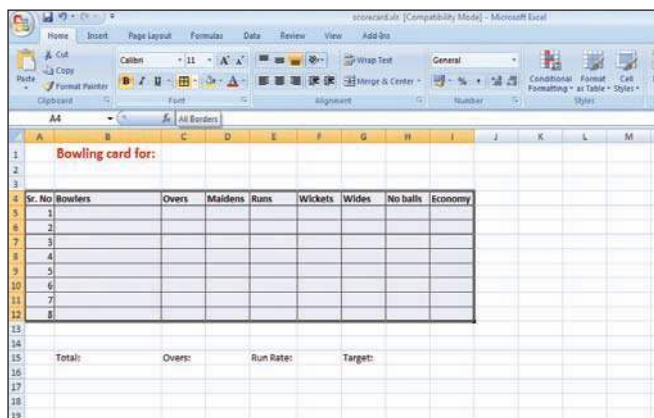
**STEP 2****CREATING THE BOWLING SCORE CARD**

A team usually plays a maximum of eight bowlers, so it is advisable to create a bowling scorecard on a separate sheet. To do so, carry out the following steps:

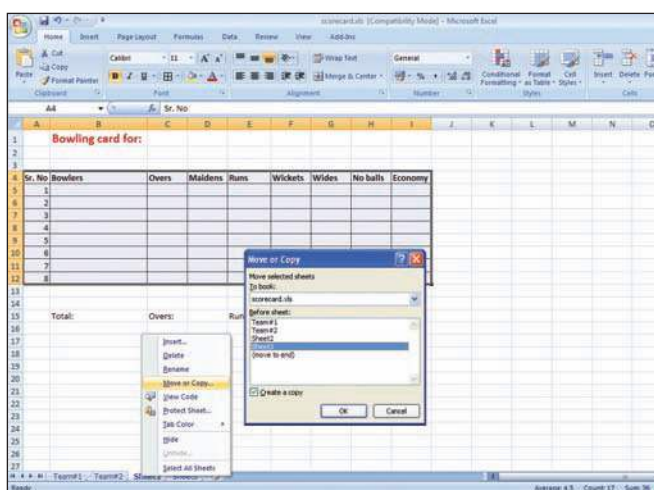
1. Go to 'Sheet3'.
2. In cell B1, type the text as 'Bowling card for:' and set the font color to 'Dark Red'.
3. Set the font size at '15'.
4. Select cells B1 and C1. Click the 'Bold' button from the 'Font' section.
5. Set the column width as per your requirement.
6. Type the following text values in each cell starting from cell A4 up to cell I4 - 'Sr. No', 'Bowlers', 'Overs', 'Maidens', 'Runs', 'Wickets', 'Wides', 'No balls' and 'Economy'.
7. Select cells 'A4:I4' and click the 'Bold' button from the 'Font' section of the 'Home' tab.



8. Use the fill handle to create a series of 1 to 8.
9. Type 'Total:' in B15, 'Overs:' in C15, 'Run Rate:' in E15 and 'Target:' in G15.
10. Select A4:I12.
11. Select the 'All Borders' option from the 'Borders' drop-down of the button of the 'Font' section.



12. Right-click on the 'Sheet2' sheet tab.
13. Select the 'Sheet3' option in the 'Move or Copy' dialog box.
14. Check the 'Create a copy' option. Click 'OK' to continue.
15. Right-click on the each sheet on at a time. Select 'Rename' and type the team name to identify the sheets better.



CHIP PLUS TIP

USING THE COUNIF() FUNCTION

This format works great if you have to use it as printed copies. But if you need to use it on a computer, you could use a few formulae to make your life easier. You can use the COUNIF() function to count the total wides, no balls and maiden overs bowled by a bowler. To do so, carry out the followings steps:

- [1] Type the 'W' in column D16, 'NB' in column D17 and '0' in column D18 in the 'Bowlers' sheet of your workbook.
- [2] Type the following formula in cell E16: `=COUNTIF(B4:Q13,D16)`.
- [3] Drag the fill handle to copy the formula to cell E17.
- [4] Type the following formula in cell E18: `=COUNTIF(Q4:Q13,D18)`

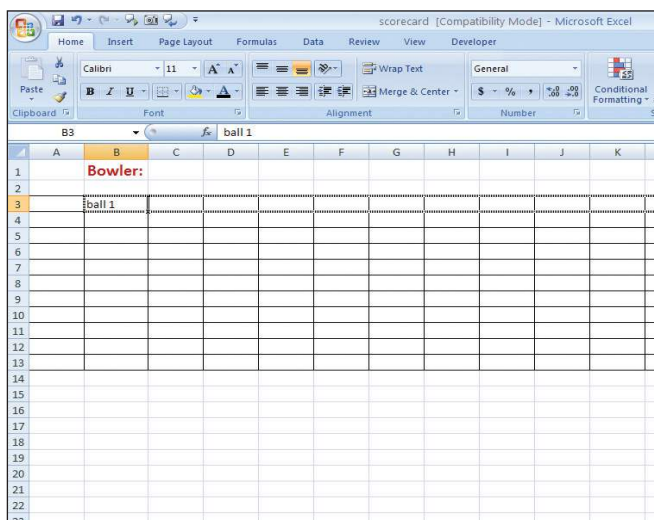
NOTE: This will only work for single alphabets. Use `=COUNTIFS()` function for multiple conditions.

STEP 3

CREATING DETAILED SCORE SHEETS

IT is extremely tiresome to keep scores in matches and if it's a high scoring game, every run, every extra, and every wicket counts. To create detailed score sheets, carry out the following steps:

1. Go to 'Sheet3'. Type 'Bowler:' in cell B1. Keep the cell style similar to headers on the other sheets.
2. Type 'ball 1' in cell B3. Create a series vertically up to 'ball 15' using the fill handle.
3. Type 'TOTAL' in cell Q3 and make the text bold.

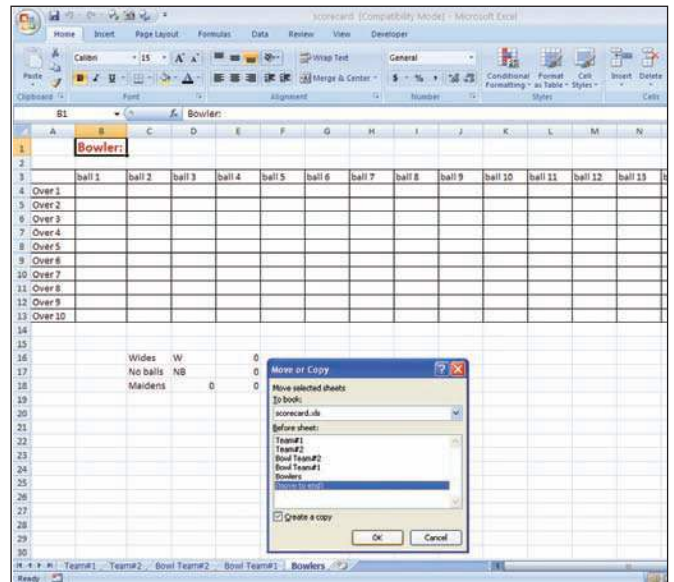
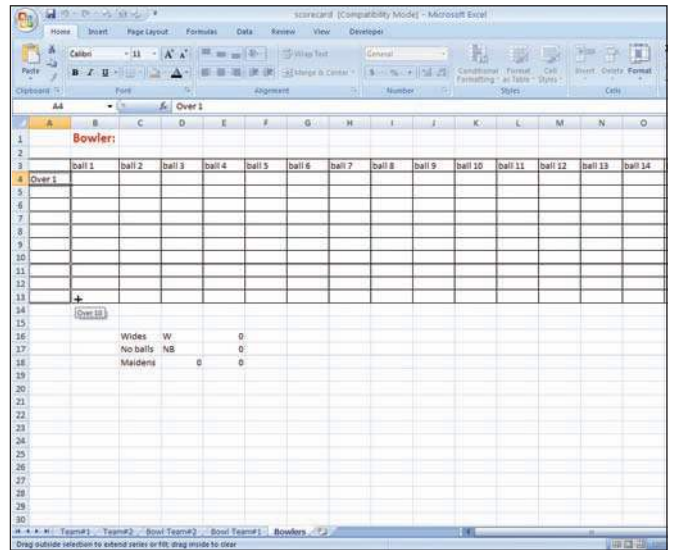


CHIP PLUS TIP**SETTING PRINTER OPTIONS**

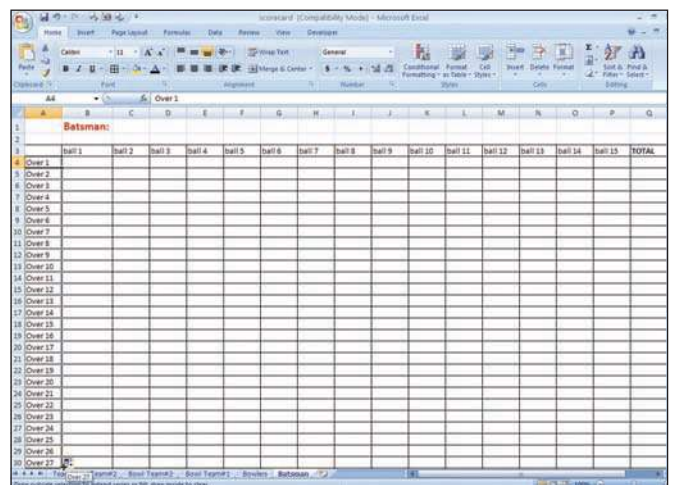
Once you have your scorecards, it's advisable to avoid the scorecards running into separate sheets horizontally. To make sure that all the columns of your scorecard fit into one sheet, carry out the following steps:

- [1] Select the cells to be printed.
- [2] Go to the 'Office Button'.
- [3] Select 'Print | Print Preview' option from the drop-down list.
- [4] Click the 'Page Setup' button from the 'Print Preview' tab.
- [5] Go to the 'Page' tab of the 'Page Setup' dialog box.
- [6] Set the 'Orientation' option to 'Landscape'.
- [7] Select the 'Fit to' option and select '1 page(s) wide by 99 tall'.
- [8] Click 'OK' and print the file.
- [9] For multiple copies, set the required value under the 'Number of copies' control.

4. Rename the sheet to 'Bowlers'
5. Type 'Over 1' in cell A4. Create a series horizontally up to 'Over 10' using the fill handle.
6. In cells C16:C18, type 'Wides', 'No balls' and 'Maidens' respectively.
7. Apply borders to your cells.
8. Your bowling score card is ready. Use one sheet per bowler to input the scores.
9. Create a copy of the sheet named 'Bowlers'.
10. Rename the sheet as 'Batsmen'.



11. Clear out the contents of cells C16:C18.
12. Drag the fill handle to complete the horizontal series to 'Over 50'.
13. Apply borders to your cells.
14. Your batting score card is ready. Use one sheet per batsman to input the scores.



Bringing technology to television audiences

There's a lot more to cricket than simply hitting a ball with a bat. It's a game of skill and instinct. Sports Editor for CNN-IBN, Gaurav Kalra talks to us about how technology helps enliven the sport for everyone involved with it.

BY KAMAKSHI S

Q How much of technology has seeped into the game of cricket?

A Plenty! It is almost impossible to compare cricket coverage now to what it was even 10 years ago. Sports technologies like the Snickometer, and Hawk-Eye, have made the game more interactive, and have broken down some of the mystery around the game to the average fan. I think the influence of technology will only grow in cricket over time.

Q Has technology helped in un-complicating the game to the audiences?

A No, I don't think technology has come in because there is a complication from the fans' point of view. An umpiring error can cost a player his career. The aid of technology is used for decisions to be as error-free as possible, and more importantly, because the sport is under greater scrutiny from sponsors and fans. Cricket has just introduced something called the umpire decision review system, where in a Test match, if a batsman is unhappy with an umpiring decision, he can ask for a referral. If it proves that the decision was, in fact, given incorrectly, he can stay on and continue playing. So technology has become that much bigger a part of cricket now, because it's directly influencing the course of the game.

Q How much influence of technology do you see at the grass roots level of cricket, that is, training at cricket academies?

A I would be surprised if I saw too much technology there. Coaches at the international level need technology to check kinks in the players' techniques and to make slight adjustments. But at the grass roots level, where the basic game is being taught, it still remains a coach's game, where the coach imparts knowledge on to the player. Also, there is the cost factor, because acquiring technology requires reasonable funding and that may not be always available with coaching centers. There will be a few factors coming in, but not too much.

Q What type of technology do you think is used for training by professional cricketers?

A More than technology, there they use training methods like gyms and fitness training, and technology has helped in improving the quality of equipment. But in terms of using technology to get better as cricketers, it will be used increasingly at international levels, because coaches record players in practice sessions as well as in matches to point out technical errors that they may be making. Those errors are erased because of technology, but it still remains an instinct and skill game.



GAURAV KALRA
Sports Editor, CNN-IBN

Gaurav Kalra has been producing sports content on television for over a decade. He started his career at Trans World International, where for four years, he worked on a variety of programming, including magazine shows, news bulletins, and live broadcasts.

In his next role at Quintus, Gaurav produced a series of programming under the Wisden brand name, including the Wisden Indian Cricketer of the Century and the Wisden Awards. Gaurav joined CNN-IBN as Sports Editor in 2005.

Q Has excessive interactivity between cricketers and fans through mediums like Twitter brought down their 'star' factor?

A Interactivity between fans and cricketers has benefitted out of technology. If you see the IPL teams, for instance, they have dedicated websites for their fans. You can get on to the players' Facebook and Twitter pages, so there has been a greater influence of technology in the way players deal with fans. So there has been a marginal increase in the fans' relationship with the players, and more so in tournaments like the IPL, where there is a chance for franchisees to monetize and create a greater buzz around their events and fan club. ◀

Beyond the fence, through the lens

The introduction of the instant replay in cricket soon gave rise to other technologies like stump vision camera, multiple camera angles, and analysis graphs. These have helped improve the quality of the sport as well as the players' performances. They also aid in decision making, both for players as well as umpires.

BY GARETH MANKOO



There is no end to the wonders that technology can add to our nation's favorite sport. They have made it possible for you, the fans, to sit back and gauge the performance of your team and its players from the comfort of your home. We've handpicked some of the finest technologies that have been incorporated into cricket over the years. Many of these tools help create a richer viewing experience for audiences, giving them a closer look at a well-bowled delivery or a close appeal for LBW. However, these can also be used to help the third umpire adjudge close decisions, thus having a more direct impact on the way the game is played.

Many close decisions in international cricket matches are taken after referring to the third umpire. The third umpire's decision is called upon in specific instances, where the two on-field umpires are unable to take an accurate decision. The first time the third umpire's decision was called upon was during the 1992 South Africa-India Test series, in which, Sachin Tendulkar became the first player to be declared out by the third umpire. Just as it is done today, the third umpire used TV replays to adjudge Tendulkar run-out.

THE functionalities and responsibilities of the third umpire have grown over the years, since it isn't always possible for on-field umpires to take accurate decisions, but also due to increased scrutiny from analysts and fans.

After seeing this contribution of technology to cricket, several other technologies have come into existence and have made their way into modern cricket. Many of these technologies are now commonplace in television cricket coverage, helping us better understand the game. We're going to share more information on these technologies with you, so that the next time you're watching a replay, you can fully appreciate the amazing technology that lies behind it.

TELEVISION REPLAYS/ THIRD UMPIRE

INSTANT replays have, over the years, become an integral part of television broadcasts. Mostly, instant replays follow a significant ball or an incident that may have been missed out (or one that may require reviewing) during a match. The first instance of television replays in a sports broadcast was back in the 1950s. Of course, the technology has come a long way since then, and has completely changed the way we watch the game. Even though TV replays are now taken for granted and seen after almost every ball is bowled, it is important for us to know that it is one of the main reasons behind most of the newer technologies. In fact, the whole concept of the third umpire came about thanks to the accuracy and the ability to make efficient decisions that instant replays afford.

Today, many close decisions are taken after referring them to the third umpire. These include stumpings, run-outs, boundaries or catches. Certain parts of the video are zoomed into and focused upon, so as to facilitate decision making. Multiple camera angles are also used.

According to the laws of the game, a batsman can be declared 'out' only if the bails on the stumps are removed, or if the wicket has been completely uprooted, either by the ball, bat or by any fielder holding the ball. Similarly, catches are sanctioned only if the third umpire is convinced that the ball did not touch the ground immediately after the catch is taken. This can be quite difficult for the on-field umpires to judge, and hence, in close situations, the third umpire is called upon to either aid in the decision, or

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The third umpire decision is displayed on the giant screen on the ground. Traditionally, there are green and red lights used, that announce the third umpires decision.



There are many instances of catches when a ball may be grounded. In such instances the on-field umpires may call upon the decision of the third umpire.



The official Dartfish website is where you will find more information about the application as well as about other technologies like SimulCam and StroMotion.

to take the decision himself. The same applies when there is doubt about whether the ball has crossed the boundary rope.

ULTRA SLOW MOTION

THE IPL has brought to life a better and more precise slow motion feature called the Ultra Slow Motion replay. As you may have noticed, the regular slow motion clips are often displayed as individual frames that are extracted from the video. However, even these frames fail to capture tiny snippets that may be critical to decision-making. So the IPL has adopted the Ultra Slow Motion replay that provides a more detailed capture of the game. The technology uses special cameras that capture video at a higher frame rate, therefore allow replays that are slower and detect even the minutest of movements.

SIMULCAM

THE SimulCam (simulator camera) tool can be used to superimpose the movement of one player over that of another player so as to compare the differences in movement. It is a great tool when you want to compare the performances of two differently styled sportsmen. The SimulCam also lets players know what gives their counterparts a competitive edge over them.

It is important to note that, for the SimulCam to work to the fullest, the players have to be present at the same location but in different positions.

DARTFISH PRO

DARTFISH is an amazing tool that has made sophisticated analytics, which were earlier only suited to international cricket budgets, available at the training and grass roots level. The Dartfish application is essentially a video analysis tool that has great features like visual feedback, analysis of tactical performance, and an integrated view for players, coaches and other concerned authorities over the Internet.

The application connects and uploads videos to its very own Internet channel called Dartfish.tv. Videos can be recorded in various formats, including HD, low quality footage from sources like TV tuner cards (to record a live game), and cameras. Once the video is recorded, you can run various analytical tools to check the nature of the delivery. Some of the analytical tools available with Dartfish include:

- Replays in loop or just a one-time play
- Control the speed of replays
- Magnifying and zooming into a particular part of the video
- Break the video into fractions of images



- ▶ Mark comments on the video and tag them
- ▶ Measure the various angles and other dimensions of play on the video, and create a CSV file as back-up.

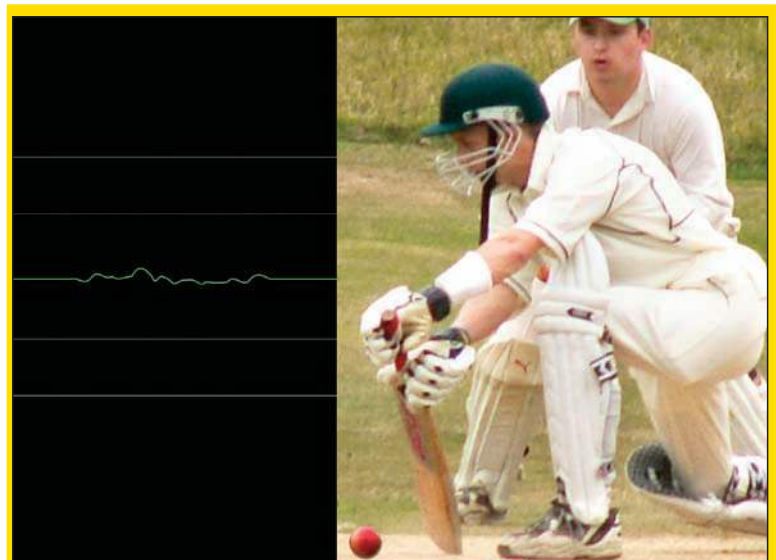
Additionally, you can use the drawing tools to mark circlers, arrows and other diagrammatic elements in the analyzed video that will help you with future analysis.

STROMOTION

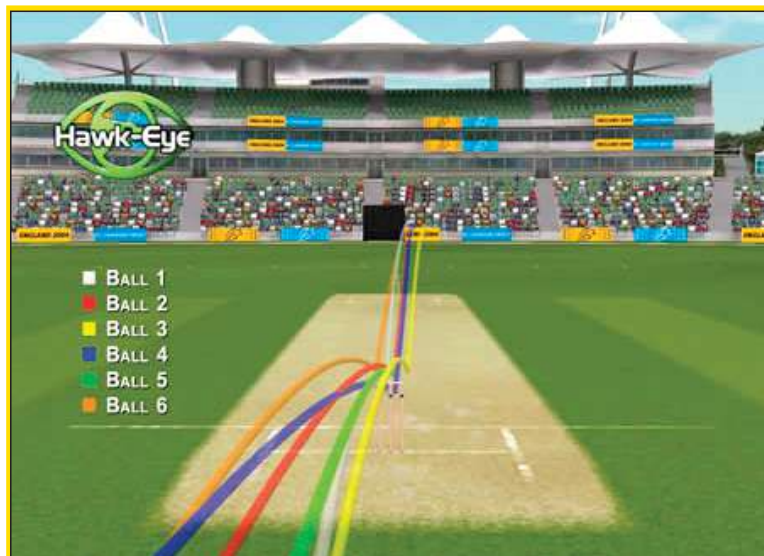
JUST as the SimulCam superimposes videos of two different players to check the difference in their playing style and form, the StroMotion technology creates an amazing trajectory video footage that shows the evolution of a player's movements. These form a frame-by-frame sequence that can be viewed as a series of images. The concept of StroMotion is based on stroboscoping. In this, the video is actually treated as if it were a collection of images that are sequentially arranged so as to study the trajectory of the player. This is ideal for analyzing a player's performance and pinpointing the point where the player faltered.

SNICKOMETER

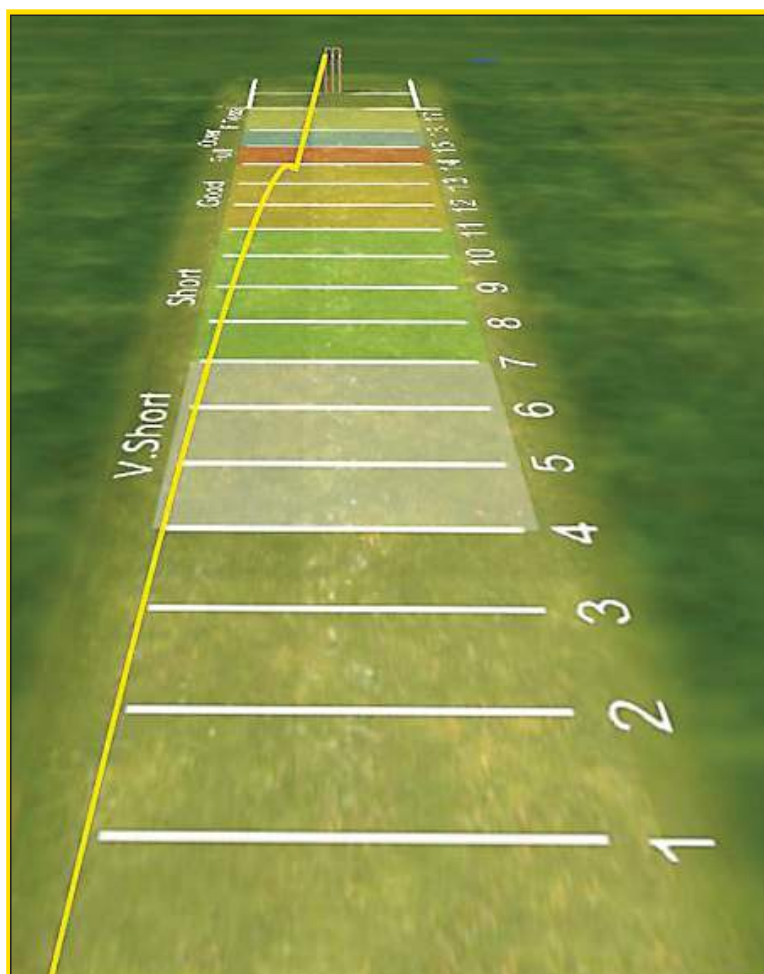
THERE are many instances when viewers as well as umpires find it hard to tell if a ball that has gone past the bat took a slight edge on the way. Fast bowlers and spinners are able to move the ball both in the air and off the pitch, therefore allowing them to beat the batsman with the movement. The aim with such deliveries is to draw the batsman into getting a faint nick on the edge of the bat before carrying to the wicketkeeper or slip fielder. Very often the slight nick, or snick, is too minor to be heard or noticed visually. Of course, we have slow motion replays to determine if there is a deflection in the ball's trajectory. But in the case of very faint edges, even this doesn't suffice.



The Snickometer displays a high peak on the sound graph to show contact with the bat. These peaks are distinctly different from other sounds, such as that of the bat hitting the pad.



Each ball of the over is represented by a different color code. The trajectory of each ball is represented with these colors.



The pitch is ideally divided into various bowling lengths. These help determine the length and accuracy of the delivery that's bowled.

The Snickometer was first conceptualized in the 1990s by English computer scientist Allan Plaskett. It is a specially designed means of gauging the amount of contact, or lack thereof, between the ball and bat at the precise moment of impact, with accurate results. The meter reflects a snick caused by the ball hitting the edge of the bat, and this is represented by a sharp rise in the Snickometer graph.

The readings of the Snickometer are based on the data taken while playing back slow motion television replays as well as sound from the stump microphone. However, the on-field umpire cannot invoke the services of the Snickometer, no matter how tight a decision may be. The Snickometer is simply an analytical and reviewing tool, and is widely used in television broadcasts.

One has to note that the Snickometer isn't an absolute system, as there is no way to ascertain with complete accuracy whether a peak in the Snickometer graph is a snick. Having said that, different sounds are represented differently in the soundwave. So the graph for a snick is distinctly different from that of the ball hitting the pad, the bat hitting the pad, or the bat hitting the ground.

HAWK-EYE

LBW decisions are highly technical and subjective in nature. Whether a batsman is adjudged LBW depends a lot on the umpire's interpretation of the situation, and thanks to the uncertainty around the accuracy of LBW decisions, these are closely scrutinized by players and audiences alike. Even slow motion replays were unable to accurately convey the accuracy of an LBW decision. That was until the amazing and vastly popular Hawk-Eye technology came along.

Hawk-Eye was developed by engineers at Roke Manor Research Limited in 2001, and is widely used in tennis and snooker. In cricket, the main function of Hawk-Eye is to trace the path of the ball along a projected line and length that is calculated from the moment the ball leaves the hand of the bowler.

The first instance of Hawk-Eye being used in an international cricket match was in 2001, during a Test match between England and Pakistan. The principles of triangulation are used to calculate the projected nature of the delivery or the path of the ball. Visual images and timing data are provided by four high-speed video cameras that are located at different locations and viewing angles. The system processes the video feeds and uses a fixed model to include the data on the rules of the game.

A frame-wise inspection of the video feed is used to calculate a 3D path for the ball. The path of the ball

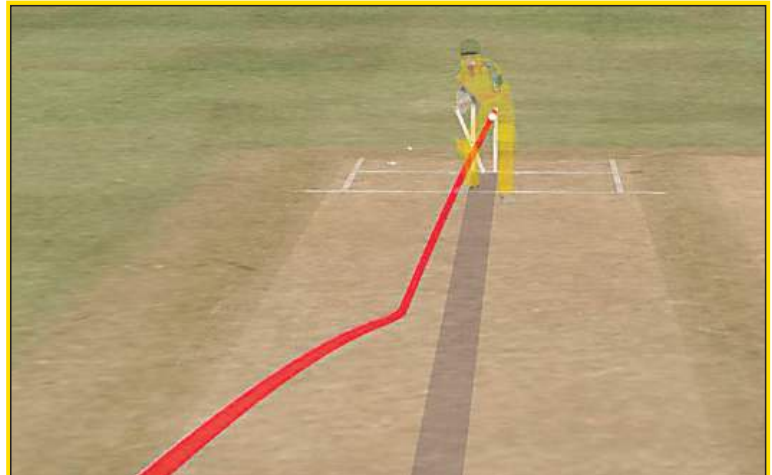
is thus calculated and visualized from all angles, and the nature of the ball's swing, bounce, and turn result in a delivery that is matched with the saved data in the database.

A huge advantage of this system is that it maintains an archive of readings of each delivery bowled in a match. This helps players and fans judge the bowling performances and the nature of the pitch. Hawk-Eye has proved to be a successful and universally-accepted analytical tool, and has even made its way into popular cricket games like Codemasters' Ashes Cricket 2009. ◀

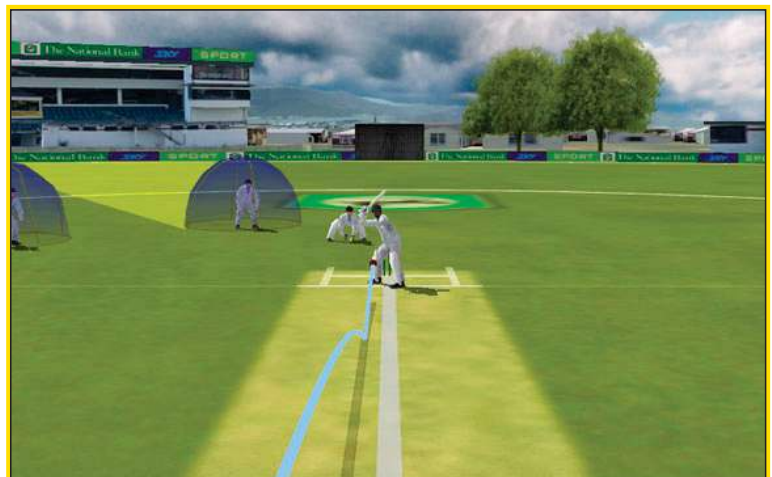
HOW 'HOT SPOT' AIDS DECISION-MAKING



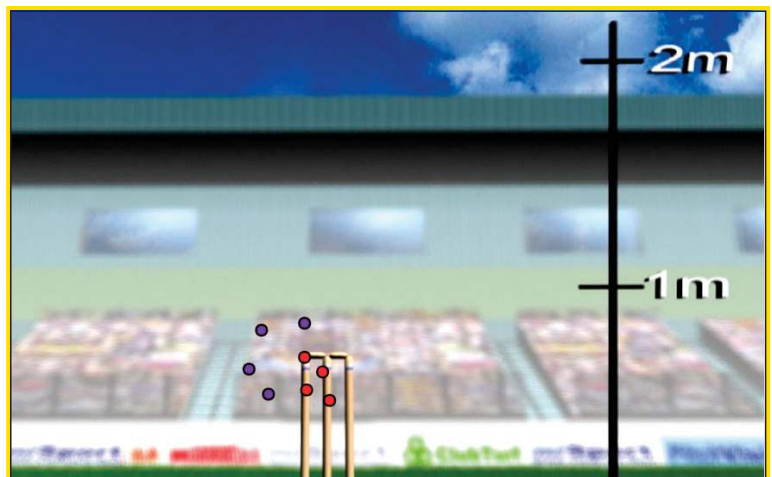
Hot Spot is an all new technology that helps determine whether the ball has struck a batsman's pads, bat or body. The system uses a pair of infrared cameras that are placed on opposite ends of the ground. The cameras are capable of sensing and measuring the heat generated from the friction that is caused after the impact of the ball. Hot Spot helps in determining whether the batsman is 'out caught' (in case the ball hits the bat first and then the pad) or whether he is out owing to a LBW. Hot Spot is officially used in the referral system that is currently under trial in Test matches, but has yet to make its way into the shorter versions of the game.



Hawk-Eye is often used to determine the accuracy of an LBW decision. The projected trajectory helps viewers see the path the ball would have taken had it not been obstructed by the batsman.



Many computer games also make use of the Hawk-Eye technology to help gamers understand bowling better.



Hawk-Eye can also be used to measure which balls were likely to have hit the wicket and which of them would have missed the stumps.

1774

The first known physical set of rules to play the game, called the Laws of Cricket, is developed by the Star & Garter Club of London. This will later be codified by the Marylebone Cricket Club (MCC) in 1788

1900



Cricket makes its first and only appearance in the Olympic games. A French team consisting of British embassy officers lose to England

Test cricket makes its first appearance on television as the BBC shows live coverage of the second test of the Ashes from Lord's Cricket Ground, England

1975



The ICC Cricket World Cup is inaugurated in England. West Indies beat Australia to lift the coveted trophy

1990

A camera fitted in the middle stump, called Stump Vision, is introduced

1938

1748

After being banned by Oliver Cromwell in the 1600s, the Court of King's Bench finally legalized the sport

Test cricket made its first international appearance in a match played between Australia and England

1909



The (Imperial Cricket Conference) ICC is formed as a world body for cricket administration. It will be renamed as the International Cricket Council in 1989

1971

One-day International cricket makes its first appearance as Australia take on England at the Melbourne Cricket Ground

The third consecutive ICC Cricket World Cup is held in England. India, whom many saw as underdogs in the tournament, win the trophy for the first and only time

1877

1983

TIMELINE

Technology in Cricket

Cricket enjoys unprecedented popularity in all the cricket-playing nations. This has also resulted in some interesting tournaments like the Ashes, the ICC World Cup, the Champions Trophy, the T20 World Cup and the IPL. Here's a look at how technology helps the audience understand the game better as they watch it.

BY KAMAKSHI S

CRICKET is the most popular sport in India, and yet, not much documentation is available about the type of technology used to strengthen the game while it is being played. While teams and players use a variety of training techniques, the extent of technology used during the course of a game is still low.

England is known as the birthplace of cricket and it travelled with the British wherever they built their colonies. Back then, it was only played by men, hence the title - the gentleman's game. It was a subdued sport that focused more on skill than athleticism, as opposed to more aggressive sports like football and rugby. It was also a game of leisure, where each match would go on for four consecutive days, keeping in mind the amount of travelling the guest team had to embark upon to play a single match (initial international matches were played mostly between England and Australia).

As times changed, so did the sport, and several rules were codified. Again, being a technical sport, there were too many rules to keep in mind. The Marylebone Cricket Club (MCC), a private English Club, was the first to codify a set of rules, called the 'laws of cricket', to create a uniform and fair way to play the game. These contain 42 sets of laws, which cover every aspect

1999

The Snickometer makes its first appearance on TV courtesy Channel 4, UK

**2002**

the first LBW decision using TV replays is taken in a Champions Trophy match between Sri Lanka and Pakistan. Shoaib Malik is the first casualty.

Australia defeated New Zealand in the first International T20 match at Eden Park, Auckland, NZ

A special bowling machine, called Merlyn, with the ability to bowl a variety of deliveries earns a lot of publicity as England uses it in training before the Ashes series

2005**2008**

Season 1 of the Indian Premier League (IPL), initiated by the Board of Control for Cricket in India (BCCI) commences

2010

The Last four of the IPL matches are touted to be screened in the 3D view

IPL and Google tie up for live matches to be telecast via youtube.com

The Last four of the IPL matches will see the use of spydercams to provide aerial live images on the matches

1992

The third umpire is introduced in the South Africa-India Test series. Sachin Tendulkar is the first batsman to be adjudged run out using the technology

The Hawk-Eye technology debuts in the England vs Pakistan Test match at the Lord's Cricket Ground, England.

As an extension to Hawk-Eye, a red graphics strip to depict delivery pitch location, called the red zone, is first unveiled by Channel 4

2001**2003**

The ICC goes tech as it distributes a computerized Duckworth/Lewis Calculator for rain affected matches

2006

An infra-red-based imaging system to find out if the ball has struck the batsman, bat or pad, called the Hot Spot, is launched by the Australian Nine Network in the first Ashes Test

The ICC in collaboration with the World Anti-Doping Agency (WADA) implements firmer anti-doping rules

**2009**

of the game, including umpiring standards, pitch and ground conditions, and fairness of play.

The Imperial Cricket Conference was the first world governing body for cricket. It came into being in 1909, almost five centuries after the first game of cricket was played. They changed their name to the International Cricket Conference in 1965, and finally adopted their current name - International Cricket Council (ICC) - in 1989.

Slowly, cricket started to see increased enthusiasm from women. In fact, women's cricket can be traced as far back as 1745. However, internationally, women's cricket only flagged off in 1934 in a Test match featuring the English and Australian women's teams.

The International Women's Cricket Council (IWCC) was formed in 1958 to coordinate women's cricket all over the world, and it was eventually merged with the ICC in 2005. There have been nine World Cup tournaments for women, five of which were won by the Australians. England has also been one of the dominant forces in women's cricket over the years.

India started its stint of First Class cricket as early as 1864, in a match between Madras (now Chennai) and Calcutta (now

Kolkata). The Ranji Trophy is the oldest domestic First Class series played in India, with the first season played over 70 years ago in 1934-35. As the popularity of the sport grew, so did the need to make cricket more audience-friendly.

The 1980s saw a phenomenal rise in the popularity of One-Day International cricket in India, followed by Twenty20 cricket, which came into the limelight in the 2000s. Some marketing endeavors also tried to popularize gully cricket in India, receiving only a lukewarm response.

For the benefit of television audiences, and for statistical and tactical planning, several tools are made available for the sake of in-depth analysis during and after a match. The placement of on-field cameras helps TV and stadium audiences understand the game better. Providing more analytical tools and depth to TV coverage are technologies such as TV replays, ultra slow motion cameras, Snickometer, DartFish, Hawk-Eye, Hot spot, Red Zone and other extensions of these technologies (like the wagon wheel).

With more and more youngsters trying their hand at the game, the rise in the use of technology at the grass roots level is the need of the hour. ◀





Shooting pictures in motion

We've all experienced the frustration of being just a fraction late in catching that magic moment on camera. Being quick and incisive enough to capture these fleeting moments can be quite a challenge, be it a memorable stroke in a cricket match or a stunning shot on goal on the football pitch. To seize that perfect moment before it's lost forever, timing is all-important. We give you 20 tips on how you can achieve just that.

BY SAMIRA SUKHIJA

Whether you aspire to be a professional sports photographer, or you simply wish to shoot some great photographs of your child's school sports events, all it takes to master the art of action photography is a thorough understanding of what you are shooting. Combine that with the knowledge of equipment and technique, hard work and practice, and you can significantly improve your action photographs.

1 LEARN TO ANTICIPATE THE MOMENT

A photo-opportunity comes by as quickly as it goes. So you have only a fraction of a second to make the shot. Before you set out to shoot any activity, study the nature of the action or understand the basic rules of the sport and research what you should be specifically looking out for. It will help you anticipate moments before they come, giving you enough time to trigger the shutter.

2 LOOK FOR THE PEAK OF ACTION

A photograph of the precise moment when a boxer is landing a punch on his opponent is more impactful than when he is about to land the punch. In the case of ball games like tennis, cricket and table-tennis, there will always be one brief moment when the ball can also be captured in the frame.

If you are shooting a race, then the moment the lead runner reaches the finish line and raises his/her hands in jubilation is the moment to look out for. Stay alert and look for dramatic moments like these.

3 FOCUS ON EMOTION

Emotion and energy are essential to capture great action shots. Whether it is professional or galli cricket you are photographing, look for emotion-filled images. For instance, a bowler celebrating a wicket with unbridled aggression on his face, or a dejected batsman walking back

to the dressing room. If it is a team game, then in the final few minutes, you may find stress or confidence visible on the faces of the players, depending on how their game is going. Make such scenes the central focus of your photographs to maximize the visual impact.

4 TELL A STORY

A person viewing your photographs should be able to understand what you saw at the actual event. For instance, if you are shooting your children running a three-legged race, ensure that you include their faces clearly. Their camaraderie and unspoken communication will be reflected in the way they try to support each other. That presents a more wholesome story than a photograph of just your child.

5 FIND THE RIGHT ANGLE

A good position is one that gives you a clear view of the action, keeps

📌 Team games in the rain are great opportunities. Look out for colours, sprays of mud, and emotion. Capture the action without having arms and legs cropped off at the edges of your frame.

Exposure: 1/400sec at f/2.8 (ISO 500)





© Vipin Pawar

you out of harm's way, provides a pleasant backdrop, and also works with the lighting of the scene. Make it a point to visit the location prior to a game, walk around and identify places you can shoot from. You may not be able to get access to the best spots at professional events, but that doesn't mean you can't shoot great pictures.

At motorsport races, there is generally more action at the corners, where the drivers slow down for a turn and tend to clutter together. Practise shooting at local events like boat races or a kabaddi match to build up your portfolio. Present it to a local newspaper and get yourself a shooting pass.

6 LOOK FOR UNUSUAL PERSPECTIVES

To heighten the inherent drama of action shots, look for perspectives other than straight-on views. If a person is jumping on a trampoline, shoot from a low vantage point. If

people are cycling through a busy street, go up on a nearby terrace to shoot from a high vantage point. Thus, your choice of perspective depends on the kind of action that is taking place.

7 FOLLOW THE ACTION

Since most action is over in a matter of seconds, it is advisable to use that time to focus solely on the action. The best way to achieve this is to train your 'shooting' eye to use the viewfinder. Follow every movement of your subject, simultaneously triggering the shutter at opportune moments.

However, consciously learn to use your peripheral vision, especially with the eye that is not looking through the camera, and teach yourself to pay attention to what is going on around you. You will get used to receiving visual inputs from both eyes and you will be able to ensure that you do not miss out on any exciting photographs.

📌 An action photograph is not complete if it does not portray motion. Choose the appropriate shutter speed and trigger the shutter at the precise time to avoid shooting a static composition.

Exposure: 1/2500sec at f/4 (ISO 400)

Make Notes

Keep field notes of your photography sessions, as studying them later will give you an insight into the exposure settings and vantage points that work best for particular kinds of action or sports. It will also help you analyze why some photographs worked better than others.

8 KEEP SIMPLE BACKGROUNDS

Clean backgrounds work best for action photographs. There should be no distracting elements or clashing colors, as they tend to take the focus away from the main subject. Choose a shooting position that gives you the perfect background. If a cluttered background is unavoidable, use an open aperture to throw the background out of focus. With the foreground too, if an element results in a 'break' in the action, you will need to find ways to avoid it.

9 INCLUDE ELEMENTS FOR EXCITEMENT

Apart from the action, it helps to include other elements related to the action. Whether it is the medium of action (a car or a horse), or a prop used in it (ball or bat), use framing that shows them being used. The captured images help you complete a visual story that covers the events surrounding the action.

10 LOOK FOR THE PERFECT LIGHT

The sun is the primary source of light for most action. Harsh, direct sunlight is ideal for colorful action shots and it is bright enough to freeze action as well. Shooting early or late in the day will give you an opportunity to experiment with backlighting. It works best when you have water as an essential component in the scene, may be in the form of sweat dripping off a player or as splashes of water in activities like river rafting, boat races or at an amusement park. Observe how light falls on your subjects and the effect it has on them, and accordingly, choose the appropriate metering mode and exposure settings.

11 THINK CREATIVE

Action photography does not always have to be about sharpness, details, perfect colors and the perfect frame. You can take some effective photographs by shooting silhouettes of the action, including dramatic

Being alert and attuned to the game helps to anticipate key moments, like this wicket, to get the timing of the shot just right.
Exposure: 1/1600sec at f/5.6 (ISO 250)





© Vipin Pawar

skies, or using creative crops. Not only do they make aesthetically pleasing pictures, but they also help engage the mind of the viewer. Implied action is also a powerful way of portraying action. For instance, if you shoot just the muddied shoes of a footballer, it conveys the high action of the game without actually showing it.

12 BE TECHNICALLY SOUND

Bringing out movement in your photographs is essential for action photography. Whether you wish to freeze motion, introduce blur, or pan the camera with your subject, you need to be familiar with the techniques and know which one will work with what kind of subject. Analyzing the speed of a subject and the action, the distance from the camera and direction in which the subject is moving will help you decide the required shutter speed.

13 PACK ONLY WHAT YOU NEED

The kind of camera and lenses you need depends on what you are going to shoot. If you wish to shoot action on the streets, a basic 35mm camera with its kit lens will suffice. For a school sports event, a super-zoom lens or camera should be more than enough. If the action is limited to a defined area, then a wide-angle lens is your best friend. A flash will be needed only if you plan to shoot indoors, or if the light levels are too low. The smart thing to do is to understand the action. Pack only what you need, as carrying too little or too much equipment can be an obstacle.

14 KNOW YOUR CAMERA WELL

It helps to have complete knowledge of your camera's design, position of controls and its working. For instance, you should be able to

ⓘ In activities that involve similar elements repeating themselves, there will always be a point when they appear synchronised. This group of cyclists was photographed from the corner of a road. Exposure: 1/800sec at f/4 (ISO 250)

enable exposure compensation or change shutter speeds without looking at your camera. This helps you focus on photography rather than worrying about camera settings. This is essential to action photography, and you will not waste any time or lose any shots.

15 CHECK CAMERA SETTINGS REGULARLY

When the light is constantly changing or the action is extremely erratic, you will need to monitor camera settings like focus, ISO and metering mode to ensure that you get your shots right. Spare a moment to ensure everything is in place, because you could accidentally change settings while shooting. That will simply mean that you may lose out on great shots because of wrong camera settings. Remember to check the status of battery power and memory cards, and always keep spares. When you realize that the battery is draining

out or you have no card space left, look for a time when the action is ebbing and use that to put in a fresh battery or memory card.

16 STAY FIT

Shooting action can involve a lot of strain. You need to spend long hours on your feet, manoeuvre yourself in awkward places, and be alert for the entire duration of the activity. This can take a serious toll on your body, especially if you are not up to it. While it may seem trivial, keeping fit actually helps improve your action photography over the long term.

17 QUICK REFLEXES HELP

Another advantage of being fit is that your mind is always alert. The moment you become conscious of a possible photo opportunity, you can focus on getting that shot and be able to revert to your original shooting position in a

📌 In situations where the action changes rapidly, shoot several frames continuously. That way you can choose the best frame later on. This photograph was shot through a pane of glass, which made up the side of a swimming pool. Exposure: 1/2000sec at f/4.5 (ISO 400)





© Vipin Pawar

matter of minutes. When you have only seconds to lift your camera, find your target, focus, and shoot the image, it helps to have quick reflexes.

18 PATIENCE IS KEY

Sometimes, an entire day of shooting may not give you that one perfect shot. Other times, just a few minutes can give you what you are looking for. Rather than getting disheartened, continue looking for photo-opportunities and put in the best of your abilities to make that great shot. The elusive great moments will come by eventually.

19 PRACTICE MAKES PERFECT

Techniques like panning take several rounds of practice before you can begin to actually predict how your shots will turn out. Spend some time with subjects closer to home. Visit local parks, attend local sports activities, and try out the techniques that you have read about

or you think you need to improve on. Eventually, you will find ways to execute them with flawless perfection.

20 MAKE YOUR OWN LUCK

Once you've thoroughly understood the nature of an action and the techniques have become second nature to you, you will find that luck comes your way more often. You will watch moments building up, identify crescendos, and be ready to capture them as and when they happen.

The more prepared you are, the more you are in control of how your photographs shape up. On the other hand, sometimes, luck does play a role. It pays to be in the right place at the right time. So do not underestimate the power of chance.

At the end of the day, it is about commitment and perseverance. To excel at action photography, you need to apply your mind, energy, and time, and develop the skills that will help you shoot stunning photographs. ◀

▶ Instead of looking for the perfect colors and details, find opportunities where you can be creative. For instance, this silhouette of a person kicking a football.
Exposure: 1/2000sec at f/2.8 (ISO 400)

Courtesy:

**Better
Photography**

Covering every angle

Most cricket lovers will argue that it's more fun to watch a game from the stands, rather than from the comfort of your own home. But that's not entirely true, thanks to 16 cameras capturing the game from every possible angle. Moreover, these cameras don't just help enrich television broadcasts, but also act as a source for graphical technologies like Hawk-Eye and directly influence the game by playing a vital role in third umpire decisions. Here's a quick view of a general placement of cameras in a cricket stadium.

BY KAMAKSHI S



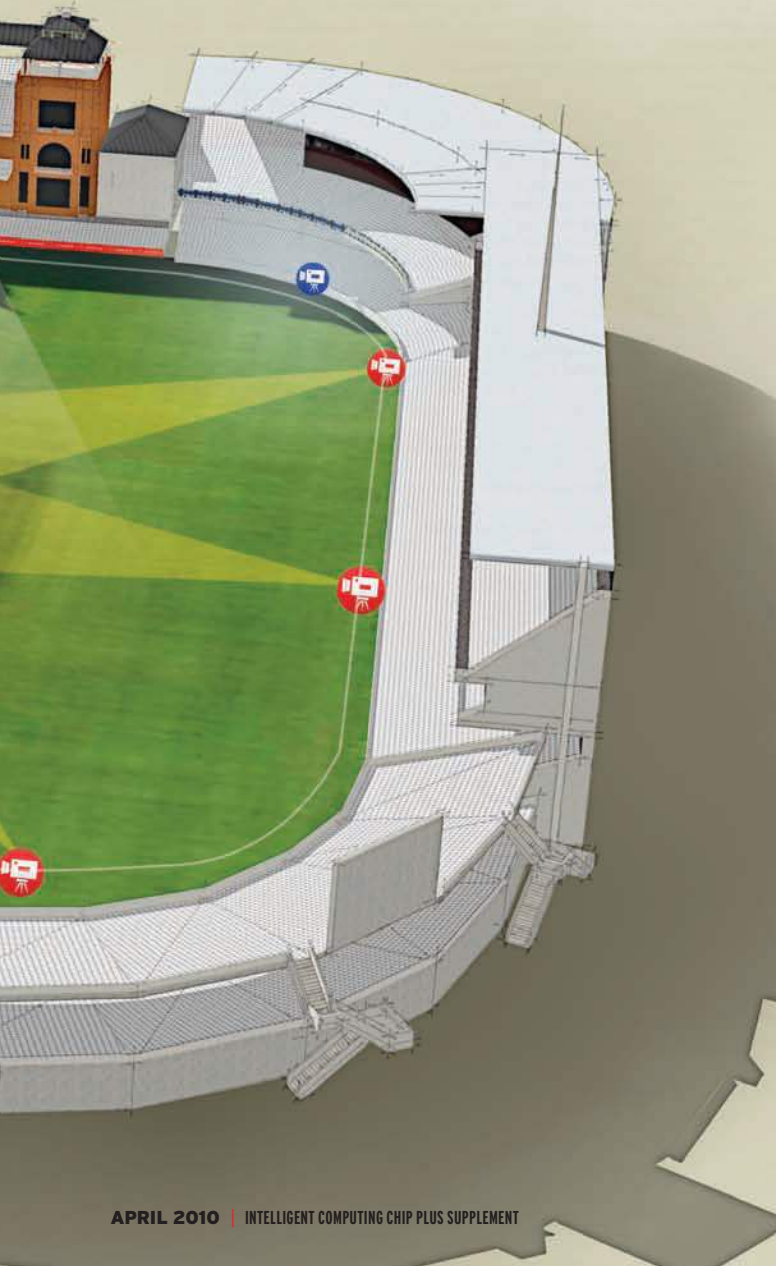
CAMERAS ON THE GROUND

Two DIGI SUPER 86XS are placed on either side of the sight screen. These optical cameras provide a stable, shake-free shooting mechanism that is HD-compliant. Equipped with an increased zoom ratio of 86X, the camera comes with a 9.3 mm wide angle, and also supports telephoto. The camera tracks the ball from a height of 8 feet from the point where the bowler releases the ball to when it reaches the batsman, and thereon. The other DIGI SUPER 86XS takes close up shots of the bowler as he begins his run-up, and the batsman's stroked and shots hit towards the boundary behind the bowler. There are several other DIGI SUPER 86XS camera placed strategically around the ground so the action can be captured effectively from every possible angle.



THE JIMMY JIB

The Jimmy Jib or Jib is designed and manufactured in Phoenix, Arizona by Stanton, and acts as a camera support mechanism for television cameras. One or more cameras can be affixed to this portable crane, which can be placed around the cricket field. It is generally used to capture crowd reactions in the stands. This moving camera system provides a different perspective to the action as opposed to the other cameras that are static. The length of the crane can be increased or decreased as required, and it requires only one person to man the crane. C





© Sachin Pandit

IPL on your browser, thanks to Google

The Indian Premier League will no longer be restricted to the stadium and your idiot box. The action will now make its way directly to your work desk. Google has forged an agreement with the IPL to stream all matches live on YouTube.

BY GARETH MANKOO

The IPL has given us a lot to cheer about this time round, especially with the announcement of live video streams of all DLF IPL 2010 matches on YouTube. This means that if you somehow happen to blow up your TV, you can always tune in to the action from your PC, laptop or mobile phone, as long as you have a good enough internet connection. You can catch all 60 matches that are broadcast across the 45-day cricketing extravaganza, all streamed to your web browser. This is the first ever major sporting event to be officially streamed live across the world. Now, that's surely a matter of pride for both the IPL as well as Google. Google will hold exclusive online rights for IPL content for two years. In return, Google will share revenues generated from sponsorships and advertising with the IPL.

PLAY-BY-PLAY COVERAGE AT YOUR FINGERTIPS

The benefit of having your favorite sport come to you via a medium like the Internet is that you have total control over what you wish to see. Unlike television broadcasts that make you alter your schedules so as to keep from missing a game or highlights show, YouTube allows users to access this content on demand. Content such as highlights, interviews with the stars of the IPL, special packages such as fall of wickets and top shots, pitch reports, and post-match presentations are now available whenever you'd like to watch it.

All of this is coming straight to the fans, and now, it's the fans who decide what they'd like to watch, and when. This initiative is sure to fuel live coverage of more worldwide sporting events on YouTube.

A SPECIAL 'YOUTUBE VIEW' FOR FANS

Those watching the IPL on YouTube are able to watch the games using a special 'YouTube View'. This, of course, is not available on television, giving YouTube viewers an added incentive, in addition to all the features that are enjoyed by television viewers.

ADVANTAGES FOR ADVERTISERS AND SPONSORS

Through YouTube, advertisers have gained a new platform to broaden their IPL marketing campaigns, though YouTube and IPL have made it quite clear that there will be only a limited number of sponsor options available all through the tournament. A huge advantage for advertisers is that they are able to advertise on the YouTube home page as well as on the live stream page. They can also stream video ads during the match itself.

The various video streams that can be sponsored and advertised in include live matches, repeat broadcasts of matches, as well as various highlights and clips available on YouTube.

HIGHLIGHTS OF THE IPL-GOOGLE TIE-UP

- ▶ YouTube to live stream all DLF IPL 2010 matches
- ▶ First major sporting event to be live-streamed across the globe
- ▶ 60 matches over 45 days to be broadcast live
- ▶ Google will have exclusive online rights for IPL content for two years
- ▶ Google and IPL will share revenue from ads and sponsors
- ▶ First time Google is live-streaming a major sporting event
- ▶ Users can share experiences on YouTube
- ▶ Users can access special content like match highlights, player interviews, wickets of the match, top sixes of the match, award ceremonies, pitch reports, and much more at any time
- ▶ 'YouTube View' - a special view of match not available on TV
- ▶ YouTube will offer innovative advertising opportunities, helping advertisers build stronger online brand associations by better engaging the audience
- ▶ Facebook: <http://www.facebook.com/IPL>
- ▶ Twitter: <http://twitter.com/ipl>
- ▶ YouTube: www.youtube.com/ipl



Besides the live stream, you can also watch previously shot footage, including match highlights and special packages, on the YouTube page.



Clarity of the IPL live stream on YouTube is at par with the TV broadcast. Viewing videos at 320p is ideal for slow connections. However, you can also view the same in HD.



A huge advantage of using YouTube to view the IPL is that you have a direct connect with all the fans. The discussion board can be used to interact with them and share your views.



The official IPL Facebook page has video updates as well as other multimedia like image galleries, and lots more.



Hear directly from your favorite stars by following the IPL Twitter page. You can also receive updates on the tournament.



The official DFL IPL website has a special page that directly helps you follow tweets by Lalit Modi and Sundar Raman, as well as fan tweets.

IPL ON SOCIAL NETWORKS

The IPL has touched just about every channel of communication this season, from the internet to your mobile phone. Social networking takes the fans' point of view into consideration and helps them directly interact with their favorite teams. You can visit the official Facebook and Twitter pages of the IPL and get to know more about the tournament. The discussion board on the IPL website also gives you a chance to interact with other fans as well as the administrators.

To know more about the IPL-Google tie-up, we spoke to **Mr Gautam Anand**, Director, Content Partnership-Asia Pacific, Google.

Q Will the YouTube broadcasts be in HD as well?

A We already have HD quality videos available on YouTube. For IPL, we'll be trying to offer the most optimal user experience. So it will definitely be high quality.

Q Tell us more about the 'Youtube View' feature.

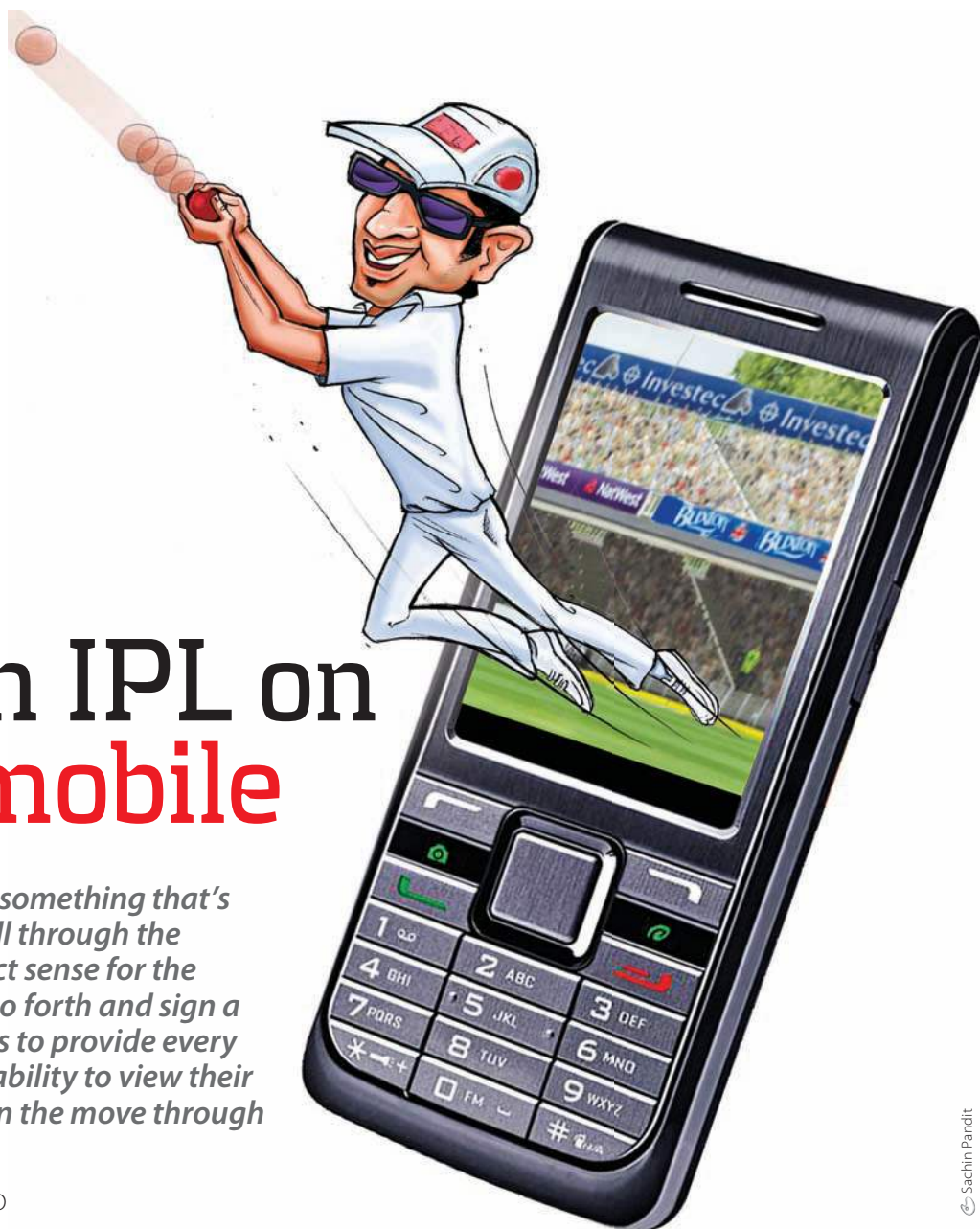
A This is the first time we are trying this out. There will be a unique feed, which will only be available on YouTube. The working title is the 'YouTube fun feed' and this will offer a picture-in-picture experience. Users will be able to enjoy exclusive content, which will include special interviews with captains, behind the scenes footage, post match parties, etc. The idea is to offer interesting content which won't be available on any other medium.

Q Is 'Youtube View' anything like the Spyder Camera view?

A This is still being worked out, so we can't comment on it.

Q Will there be lower quality versions in YouTube video streams for those with slower connections?

A The objective is to offer maximum users the optimal viewing experience of IPL on YouTube. We are aware of the infrastructure challenges, so we are doing everything we can to offer a smooth viewing experience. In India, YouTube already has over 10 million unique users, which is a big number, so we are very optimistic about the response for this initiative. **C**



Watch IPL on your mobile

Your mobile phone is something that's always by your side all through the day. So it made perfect sense for the IPL management to go forth and sign a deal with July Systems to provide every mobile user with the ability to view their favorite sport while on the move through their MiX platform.

BY GARETH MANKOO

© Sachin Pandit

Using MiX

To enjoy the IPL on your cell phone, you can either visit the WAP site: m.iplt20.com. Alternatively, you can try calling the following number: 08-123-123-123. On calling this number, you will receive a message with a hyperlink that will lead you to the IPL WAP page.

Given that cell phones are now a common and essential accessory for most of us, it makes sense to have everything you like and need on your phone. And with all of India gripped by IPL mania, it makes perfect sense to reach out to cricket fans nationwide by making the latest scores and media from the IPL available on their mobile phones. Yes, it is now possible for you to sit back on your way back from work and enjoy live streams of the IPL action on your cell phone. This has been made possible by an initiative called 'Mobile internet eXperience' (MiX) by July Systems.

WHO MADE IT POSSIBLE?

Users will now be able to watch their favorite sport live, on their favorite gadgets. On March

6, 2010, the Indian Premier League (IPL), along with their licensing partner Global Cricket Ventures (GCV), announced that they would be partnering with July Systems, a mobile Internet pioneer, to make it possible for users to view live scores and video updates on their cell phones. Vijay Srinivasan, the director of GCV, expressed his excitement with the move, saying, "This is an excellent initiative, which will help deliver the IPL real-time to cricket fans in the home market. The Indian market is absolutely key to the momentum of this exciting tournament, and GCV is very pleased to be partnering with July Systems. We believe this will be instrumental in taking the viewing experience to the next level."

Lalit Modi, chairman and commissioner of the IPL, said on occasion, "The IPL is the first sports league in the world to roll out a mass market, mobile Internet

service of this type and scale. We are pleased to partner with July Systems, pioneers in mobile internet technology, as they have the operational experience of working with the world's leading broadcasters, sports leagues, and advertisers. I am certain that IPL fans here in India will enjoy this real-time user interface now available on their very own mobile phones."

HOW DO YOU GO ABOUT IT?

All you have to do to make the most of the MiX platform is to call the number 08-123-123-123. This number is toll free. You can also visit the WAP site m.iplt20.com. The number will also be displayed on TV screens during IPL broadcasts. As soon as you call the number, you will receive a text message that will contain a link. Make sure that you're in a GPRS/EDGE-friendly zone so that you do not suffer video lag and failed connections.

However, the system is designed to work flawlessly even at low bandwidths. To add to the advantages of the platform, makers July Systems are planning tie-ups with various network service providers to provide inexpensive data access plans for users.

The main aim is to present the interface in a simplified manner so as to make it easy for everyone to use this service. This also includes those who aren't tech-savvy and are trying out the Internet on their phones for the very first time. "July Systems is pleased to partner with the IPL in launching this path-breaking sports experience on the mobile internet", said Rajesh Reddy, CEO of July Systems. "We are on the cusp of a mobile internet revolution in India, and making the IPL 'mobile' could be the tipping point." He continued, "July Systems' MiX platform aims to catalyze the mobile internet eco-system by bringing together and delivering value to its key stakeholders - consumers, advertisers, media publishers, operators, and handset OEMs."

WHAT ARE THE ADVANTAGES?

There will be more than a few beneficiaries of this service, who will be able to make the most of the MiX platform. The 'Freemium' content will help users access IPL-related data and view videos free of cost. A major chunk of the IPL content is being made available for free. There are also a few premium subscriptions that users can apply for, and that too at extremely reasonable rates.

Advertisers will benefit from this move, giving them a whole new platform to advertise on. With an expected audience base of about 120 million Internet subscribers behind them, the advertisers will be looking to make the most of this opportunity. Network operators will also benefit since a good response from the data services will add to their revenues. ◀

The IPL is the first sports league in the world to roll out a mass market, mobile Internet service of this type and scale

**- Lalit Modi,
Chairman and Commissioner, IPL**



The MiX updates help you keep up-to-date with the latest scores from the IPL.



The replays of certain moments in the match are broadcast in crystal clear full-screen mode.

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