

## SPORTS ANALYSIS PROGRAM

## SOFTWARE HELPS S'PORE ATHLETES WATCH THE BALL

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**SINGAPORE** – The national women's table tennis players may have shed many years of blood, sweat and tears preparing for last August's London Olympics.

But they also had some help from a state-of-the-art object tracking and computerised sporting analysis software program called AutoScout to help them reach their peak before leaving for London.

According to the Singapore Sports Institute (SSI), AutoScout was used by the national table tennis coaches to generate video footage and statistical information about their paddlers' playing styles.

Developed by the Advanced Digital Sciences Centre (ADSC) located at Fusionopolis, the software — which is still in a developmental stage — can be programmed to generate statistical information about a player's techniques or a team's tactical plays, not only for table tennis but almost any sport.

"What stands out about AutoScout is its ability to automate statistics," said Shaunak Ahuja, a Sports Application Analyst at ADSC.

"Based on our research, there is already tracking and analysis software out there doing a good job. But they are not automated and cannot do what ours can.

"For example, football clubs need to hire many people to analyse the gameplay footage and take notes. In contrast, ours can extract and collate the information automatically."

The ADSC had collaborated with the SSI to further develop AutoScout to suit the needs of the national table tennis teams.

According to Ahuja, some things the SSI wanted the software to do include counting the number of



What you're seeing now are very basic 3D images ... We want the graphics to look as good as those seen on the FIFA games!

**Shaunak Ahuja**  
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backhand and forehand shots made by a player, detecting the type of spin on the ball and the points scored by players using different techniques, and even identifying whether a player concedes more points on his forehand or backhand.

The SSI had nothing but praise for the software.

"Our scientists, led by our Executive Director, Associate Professor Fabian Lim, designed the platform architecture, and ADSC delivered very well with their enabling technology and know-how in sports visualisation and analytics," said SSI Assistant Director of Research and Development Su Chun Wei.

She said the program streamlined the analysis process for coaches — only one coach was needed to perform the task as compared to before when an entire team of technical support staff was required.

Table tennis aside, AutoScout can also be used in football. It can re-create entire football matches in 3D graphics and even show the user the gameplay from any selected player's perspective.

Indriyati Atmosukarto, a research scientist working on the project, explains that the software can be programmed to automate almost any sort of information.

For example, football coaches can request for statistics for every player on the field in terms of passes completed and shots on goal.

Apart from that, it can also determine how long the ball was in the air and the distance travelled.

Atmosukarto added that the ADSC is currently getting input from several S-League clubs on what they would like to get out of the software. A beta version will be ready by about mid-next year.

Subsequently, AutoScout will be licensed out to companies which can provide clubs with information-gathering services.

## PLAYER POSITIONS



## PLAYER MOVEMENTS



ADSC's AutoScout program can automatically identify players on a football pitch and track their movements before extracting the information for coaches and players. GRAPHIC ADSC