

TECHFOCUS

Technologies@World Cup

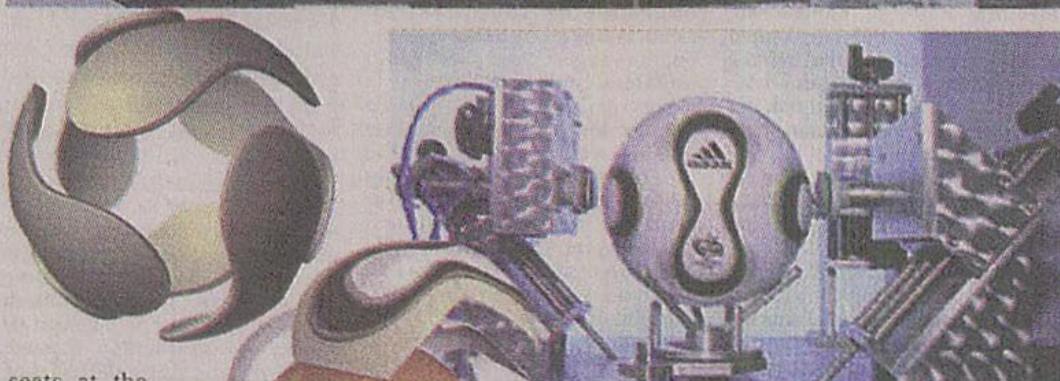
AHMED ASHIFUL HAQUE

At this year's World Cup 2006 tournament, cutting-edge technologies are being used on a massive scale. The newspaper headlines are all about the players, the fans and the scores; the human side of the game. But behind the scenes, clever use of technology are involved in every aspect of this massive football extravaganza. In particular, this World Cup sees a mass consumer rollout of two technologies that have been touted for the past couple of years: radio frequency identification (RFID) and high-definition TV (HDTV).

World Cup organisers desperately needed a way of keeping control of tickets for this event. To do this, they turned to the internet and tiny computer chips that can transmit information. To give you an idea of how big interest is in this, remember that the 2006 World Cup competition started back in September 2003, when South American teams played their first qualifying games. Since then, 195 competing national sides have played a total of 847 matches, or roughly 77,000 minutes of football, to decide the 32 competing finalists (except for Germany, who qualify automatically as the hosts). The finals are the pinnacle of a three-year-long football marathon.

The organisers had to come up with a ticketing system that would fairly distribute the available 2.93 million tickets to fans all across the world. Internet sales were an obvious choice, so all publicly available tickets were made available online. Users filled in an application form on your PC for the games they wanted to see, submitted it to the Fifa World Cup website, then sat back and crossed their fingers.

The World Cup tickets will contain radio frequency identification (RFID) tags. The tag is a small silicon chip that stores and processes data, along with an antenna, which can receive and broadcast radio frequency signals. The whole thing is as thin as a sheet of paper and about the size of a postage stamp. Philips manufactured the tags for the World Cup tickets at an estimated cost of 10 euros (around Tk 8) per chip, which is barely significant considering the euro 35 (around Tk 3100) price for the cheapest



seats at the group-stage matches.

All 12 World Cup stadiums in Germany have been fitted with RFID readers at their many entrances. Ticket holders passing through the turnstiles just have to hold their ticket near the reader, which will communicate with the tag, and all everything checks out, the turnstile will allow access. This means that tickets do not have to be checked by hand and forgeries are practically impossible. Tickets can be checked by officials to ensure that the ticket holder is the original purchaser, helping to prevent black market trading of tickets at massively inflated prices.

The stadium of the future

Germany is proud of its stadiums, with the jewel in the crown being the new Allianz Arena in Munich. It can change colour and architects say its shape and multi-panel roof are the key to the look of the grounds of the future.

Future grounds will be designed as bowls, with an abandonment of the idea of four stands surrounding a pitch, and

with roofs. A round shape creates a better atmosphere, research suggests. "You're not just going there to see the game. You want to see those other 90,000 people around you," said Rod Sheard, an internationally renowned architect and an expert on stadium design when BBC recently asked him about the future of stadiums.

"They will change, there's no doubt about it," said Rod Sheard. "The big change that's happened in recent years, and will be a real change in the next 20, is that city planners have started to realise how important these buildings are in city centres."

However, it is likely that future stadiums will not be able to seat any more people than the current maximum, around 90,000. "That's purely a practical thing, in terms of the people in the back row not being able to see the game; it gets to the point where

you may as well just stay at home and watch TV," Shread added.

World cup ball more advanced than your PC

The official ball of the tournament, the Adidas Teamgeist (team spirit), is packed to the seams with well-researched hi-tech goodness. Compared to most other footballs which have 26 or 32 sewn panels, the Teamgeist only has 14, making it far more smoother. This fact has goalkeepers going crazy since the smoother surface gives the ball a more unpredictable trajectory in the air. Translation: be on the lookout for what seem to be silly goalkeeping errors.

Backed by what Adidas calls "unprecedented" performance, the Teamgeist, which is supposedly the roundest football ever produced, is also nearly completely waterproof, thanks to a thermal bonding technology. Finally, Fifa rules state that balls must not have a more than 10 per cent weight increase when wet; the Teamgeist only gains .01 per cent weight when wet.

Matches in High-Definition
For the first time, the world cup matches are being broadcasted

at extra high quality High-Definition or HD signals for special High-Definition TVs. To get the best coverage of the World Cup finals, you will want to watch the matches in High Definition.

Now, what is this High-Definition broadcast? Let me explain: Normal PAL TV signals, like the ones we use here, use an interlaced 720x576 resolution signal for broadcasting the video. That gives acceptable video quality for most viewers. But for others, it's just not enough. The HD signal is a far crisper 1920x1080 interlaced resolution, or 1080i as it's commonly known. With HDTV, the picture quality enjoys massive improvement over the aging, and interlaced, PAL signal. And that's not all, its audio quality, equivalent to 5.1 Dolby Digital surround sound, is a treat for the ears too.

Just how good is this? Imagine a big bright and beautiful high-resolution poster in your living room. Now imagine that poster coming-into-life and showing the world cup matches. That is what a HDTV is like. Its looks so realistic, that some animals like cats cannot distinguish between HDTV and reality.

Unfortunately, HDTV is still in its infancy. It is expensive, costing thousands of dollars. And not many channels offer content in High Definition yet, even in countries like USA and UK. But it is a start and it is damn well worth it for the avid sport fan who can afford the luxury.

Also, because of the mass adoption of wide-screen TVs, largely driven by the popularity of DVD movies, for the first time, viewers worldwide will be enjoying games in wide-screen, letting them see more of the play than ever before.

Providing the slick high-tech coverage that the modern TV viewer expects is a huge job, especially as all the broadcasters around the world must fulfil the specific needs of their particular audiences. In each of the 12 stadiums, there are at least 20 digital high-definition (HD) cameras. These cover the game from every angle, with multiple cameras providing close-ups and alternative views of the action. Specialist cameras are also fitted in the goalmouths for replays. There are even dedicated cameras covering the team benches.

The cameras themselves have specifications home digital video enthusiasts can only dream of. At least 6000 cameras are going to be used, each of which has three 9.2 million pixel CCDs with which to capture every possible detail that comes through the lens. Compare this with the mere 800,000 pixel CCDs in a standard video camera to get some idea of the quality of the images being captured.

PDP-8

The PDP-8 was the first successful commercial minicomputer, produced by Digital Equipment Corporation (DEC) in the 1960s. It was introduced on March 22, 1965 [1] and was the first widely sold computer in the DEC PDP series of computers (the PDP-5 was not originally intended to be a general-purpose computer). The PDP-8 was a 12-bit computer. In its basic configuration it had a main memory of 4,096 twelve-bit words (that is, 4K words, equivalent to 6 kilobytes), expandable to 32,768 words (32K words / 48 KB). At its inception, the PDP-8 had only eight instructions and two registers.



TECHFOCUS

Dal dulls other networks with lucrative services

SHAHRIAR ROBIN

DALNET was the first major IRC (Internet Relay Chat) network that provided several convenient services that made it popular among IRC users. Dalnet is the most popular global network among Bangladeshi IRC users.

In other words, it was the first network where users had the convenience of Chanserv, Nickserv and Memoserv. If you are not sure what is being talked about here may be its time you know about the services.

Chanserv, for instance, is a service Dalnet provides a user to register one or more channels and keep that channel active for at least 30 days. To explain, if you register a channel and nobody including yourself show up there for 30 days it still will be registered to your nick.

On the 31st day, Chanserv will erase the channel you registered and let others to register it. Apart from registering channels, Chanserv also lets you add, delete channel operators and visitors to your channel and lock channel modes.

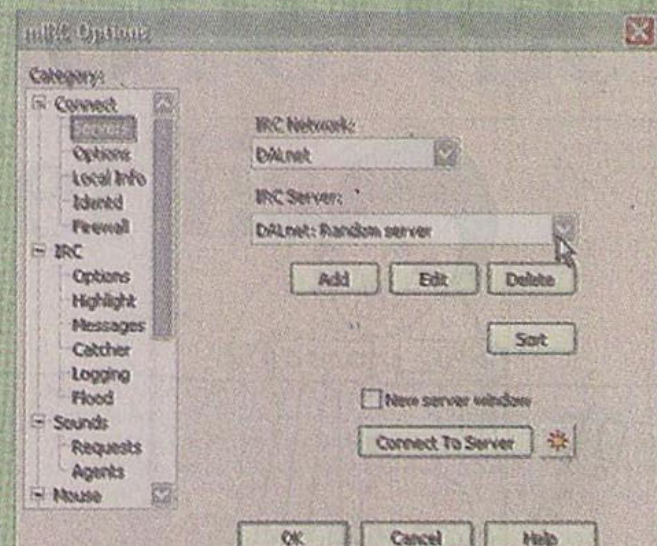
Lucrative enough, it also empowers you with an option called 'kicks', which means a user will be instantly kicked (thrown out) out of the channel whenever s/he enters the channel. A good tool to get rid of some annoying people you do not like.

Nickserv, on the other hand, deals with a user's nick-related services. You can register your nick with Nickserv and like channels you will be the owner of that nick for at least 30 days. So, it becomes a lot easier for a person to build up an identity.

Dalnet also allows a user to register several nicks as long as 30 characters while most other major IRC networks allow only seven to nine. For instance, the nicks Velvet_hour, The-Quiet-One or Extra-Ordinary_Machine will not appear full in other networks and the users would have to use smaller nicks like Starlyr, Miel, or kkn.

Memoserv allows a user to send and receive memos. Memos could be sent to registered nicks only and an owner or an operator of a channel can send memos to all the operators opening doors for offline communication as well.

Dalnet used to be the most popular IRC network in the world, commented an IRCop



(IRC operator), people who maintain the services, servers and the network. But during December 2002 and January 2003 Dalnet became the victim of malicious attacks over the internet also known as DDoS (Distributed Denial of Service) attacks.

The IRCop, who usually hangs around in the channel #chatterz, said during that period Dalnet was shutdown for weeks and a lot of users left Dalnet and it was forced to become a chat-only network.

Before this period, Dalnet allowed the users to share files with each other. Channel that were dedicated to sharing files left the network and people who had no interest in chatting and who only came to Dalnet for sharing files left the network with them.

The IRC op said the network lost many users during the attacks and it only had around 35,000 users when the dust settled. Dalnet had over 1,30,000 registered users before the attacks.

While Bangladeshi IRC servers have recently become popular among users, Dalnet became more of a community. The numbers of Bangladeshi users may be few but they have the pride of being the few who share intimate experiences with each other that other people do not in the privately owned Bangladeshi IRC servers.

BlindCat, the current founder of #Bangladesh in Dalnet, says, "We always have friendly people talking here, where as you will find more people on other servers with unethical intentions."

While talking about why Dalnet #Bangladesh is so popular he said, "The channel here is clean and we have strict rules against abusive users," adding that, "Dalnet used to be the

first to connect list in mIRC client (mostly used IRC Client) and since it was dropped from the spot a noticeable decrease in new user arrival was noticed."

BlindCat said attack on #Bangladesh is something he does not like. Accusing owners of private servers, he said, "We have a number of rivals who spend money to bombard us with floods, a method of disrupting a channel, and drones."

When asked why the use of colour barred in #Bangladesh he said it all started in the early days when not all clients could handle colour. But later it appeared the excessive use of colour made the channel glibberish. He informed that he received the channel from one Ziaul Rahman also known as Zain in the late 90's.

Several Bangla channels like #Deshi, #Lalbag and #Kotha have become popular on Dalnet recently and seems to have survived the test of time. Some of them have introduced one or several games like couple trivia, uno and timebomb and news, cricket scores and horoscope to keep their users entertained.

And there is also one Moktar, founder of #Lalbag, who did not have any academic background, should be hailed for running the channel. He learned about IRC while working for an internet cafe in Kuwait and registered the channel in 1999.

Some of the channels claims to have family environment, like #Deshi, as The-Quite-One, the founder began the channel with his sister ^eshita^, while the founder of #Kotha, ^ElectricalStrom^, said to have share the IP with four of his friends and have close relation with its users.

PHOTO TECH



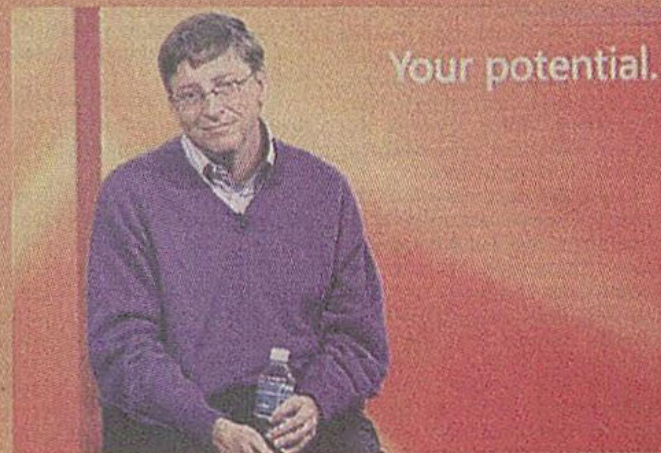
ROBOCUP WORLD CHAMPIONSHIP

So-called "AIBO" four-leg robots representing Germany (blue) and Japan (red, in the foreground) vie for the ball during the RoboCup World Championship for football robots on June 14, in Bremen, northern Germany. Until June 18, 440 teams from 36 countries will fight for the titles in different categories.



TECHNEWS

Gates to give up daily role at Microsoft



Your potential.

AP, Washington

BILL Gates isn't leaving Microsoft, he's just leaving his day-to-day responsibilities there. That was the message Microsoft Corp. sought to send Thursday when it announced that Gates planned to step back from his regular duties in July 2008, while still continuing to be chairman of the company he co-founded.

One of the key people taking on Gates' responsibilities is technology luminary Ray Ozzie,

who developed Lotus Notes and came to Microsoft when it acquired his company, Groove Networks Inc., in 2005.

The move will end an era at Microsoft, which Gates founded in 1975 with childhood pal Paul Allen and has been the public face of ever since. Gates, 50, said he is stepping back so he can spend more time on his philanthropic foundation, the world's largest.

The Redmond company on Thursday laid out a plan for other high-ranking executives to

take on Gates' duties. Gates and Chief Executive Steve Ballmer also noted that recent corporate reorganizations have been designed to move more responsibility to lower-ranking executives, so the company could more quickly make decisions without Gates and Ballmer.

Still, in an interview with The Associated Press, Ballmer conceded there was no way to replace Gates.

"If we think anybody gets to be Bill Gates, I don't think that's a realistic hypothesis," he said.

Gates stressed that although he would be giving up day-to-day responsibilities, he would still play a role at the company. "I'm not leaving Microsoft," he said.

Gates also said he had no plans to give up the distinction of being the company's largest shareholder.

"I'm proud of that," he said. Ozzie will immediately assume Gates' title as chief software architect and begin working with Gates on overseeing all software technical design.