From marketing to coaching to communication to social networking to gaming— the world is changing. So are the tools used to support table tennis. Here’s the latest.
New Coaching Technologies

iPad’s Latest Sports App – Alphasprite’s CoachPad

by Sean O’Neill

It is said that a picture is worth a thousand words and during the one minute interval between games coaches must choose their words very wisely. In the past I’ve used a small handy spiral notebook to write down key trends, scores, and tactics I wanted to share with my players; however the new iPad CoachPad app has changed my way of thinking.

For those that haven’t had a chance to use or play with an Apple iPad tablet, you are really in for a treat. Yes, for many people the iPad (9.7 inches) is just a larger iPhone (3.5 inches), and while this is true to some extent, the increased size has spawned a number of new applications (apps) that would never have worked on the smaller size device. For those into numbers, there are currently 33,150 apps made specifically for the iPad to go along with the 200,000 apps for the iPhone (which will also work on the iPad).

First off, the iPad makes it a joy to do the basics of listening to your favorite pre-match songs, watching post-match videos, managing journals, tracking match statistics, plus connecting online if you have a wireless or 3G connection. Tweeting, updating Facebook, or just visiting www.usatt.org to check your opponent's rating history would be reason enough to bring it with you to a tournament! But this is a tool and not a toy in today’s highly competitive sporting world.

Many of you are familiar with NBA coaches during a time-out diagramming the next play with a whiteboard and markers. The new CoachPad app will give the techno-savvy coaches the ability to do just the same with a simple interface and intuitive drawing tools. If you make a mistake, you can scribble them out with your finger or stylus. Personally, I think creating pre-game plans for potential opponents (see fig. 1) will pay the biggest dividends as going into a match with a plan is always better than playing the wait and see approach.

In addition to drawing up sequences for players to try to implement, you could also use it to track service or attack locations with a variety of custom tokens (see fig. 2). The iPad won’t automatically calculate totals, but it will give your player a visual clue to where they need to pay attention. I have also used the application for creating drills in practice (see fig. 3) or to show students many what-if scenarios off their serve or serve return (see fig. 4). There is no wrong way to draw up a play; the options are only really limited by your own imagination. The Gallery feature (see fig. 5) of storing past plays makes it easy to pull up your favorite plays with the swipe of a finger.

The creator, Alphasprite, is from New Zealand, and within one day of sending them an email asking if they would create a table tennis template, they had it up on their website for downloading! The most recent upgrade (1.4) allows you to use your own custom template background as well as having an easy way to export your saved plays and strategies to share via email or to import into other graphic programs. I still have a number of other table tennis apps that I use on my iPhone; however I will now have one less spiral notebook in my bag thanks to the CoachPad app!
Using Technology in Table Tennis

By Bruce Liu

I have been hooked on table tennis since I was a kid and have been involved with many table tennis activities since I started to play in the United States in 1998. I’ve started clubs, hosted tournaments, and run singles and team leagues, all as a volunteer.

Like many other volunteer-based organizations, resources are always a problem. We cannot afford to hire full-time employees or pay anyone to do much of anything for us. Most of the time, everything has to be done by a few “suckers,” the ones who started and run the organization. In order to accomplish anything, utilizing available technology becomes extremely important.

I have identified some tools we have used over the years. Most are not particularly hi-tech. They are inexpensive and yet extremely effective. They can be as simple as email, which some people cannot live without. Some can also be a bit more involved, such as live webcasting.

However, thanks to innovative companies and the price drop in computer hardware in recent years, they are no longer impossible!

• Email: This is the easiest tool. Most of them are free too. (Yahoo, Gmail, Hotmail, to name a few.) However, it can be tedious to deal with if your daily emails reach a large number. Keeping track of them can be a problem, although the email user interface (UI) has been improved over the years.

• USENET: It is a worldwide distributed Internet discussion system. People can find the right group to post to and the world will see it. One can find practically any topic on earth on the USENET. According to NewsDemon.com, there are about 10TB worth of daily posts as of September 2010. (About the same amount of data as in the printed collection of the U.S. Library of Congress) Once upon a time there was a newsgroup called rec.sport.table-tennis. People from all over the world hung out there. It was extremely popular within the table tennis community in the U.S. However, it was un-moderated - no censorship whatsoever. The discussions could get off-topic, heated, and often rather ugly. The table tennis group is still there but very little meaningful discussion takes place there any more. It was gradually taken over by moderated forums.

• Group Communication: Yahoo Groups was the first tool I used. I’m still using it and quite a few bay area table tennis clubs also use it. Unlike email, which is great for one-to-one communication, the Yahoo Group is great for one-to-many communication. All archives are preserved for future reference. The advantage of this over USENET is that the group can be moderated. The moderator can set group policy to better administer the group.

• Website: I don’t think I need to say much about this.

If your organization doesn’t have one yet, it is imperative to get one. However, you have to update the content frequently. Otherwise, you won’t get the effect you want.

• Photos: Yahoo’s Flickr and Google’s Picasa come to mind. It is a great way to show a large number of photos to your audience. Both sites have nice UI and can make slideshows on the fly. They are FREE! (Am I repeating myself?)

• Video: Google’s Youtube is probably the most popular one now. It is very easy to post video clips to share with the world. They recently increased the 100MB per clip limitation to 2GB. Lots of nice utilities to help you manage your videos.

• Social Networks: Blog, Facebook, MySpace, Twitter, and many other tools are very popular nowadays. The traffic of Facebook recently passed Google’s. So use it. It is also free. It is very easy to share text, photos, and video without much knowledge of web authoring.

• Live webcasting: This may sound scary. The hardware and software requirement can be prohibitively expensive. However, we are not talking about ESPN’s broadcasting quality for our purposes, although it can be as good as blue ray quality if you have a production team and are willing to invest in your hardware.

On the hardware side, high quality camcorders and computers are valuable commodities. However, computers advance so rapidly that the powerful model you purchased just last year may be only mediocre today.

Lot’s of events have used Dyyno’s technology to stream video. In fact, USATT’s first ever live webcast at the 2009 US Nationals used Dyyno’s technology.

Here in Palo Alto, the center of Silicon Valley, a company called Dyyno came to the rescue. Dyyno made it possible for people to broadcast their events with minimal hardware/software requirements. While other streaming solutions require their own servers, either centralized or distributed, Dyyno’s doesn’t. Dyyno uses licensed technology from Stanford University to capture and distribute data. Their turnkey solution only takes a camera feed and an Internet-connected laptop and you are set – all within minutes.

Dyyno’s solution is a proven one, not a prototype like lots of startups have. Lots of events have used Dyyno’s technology. In fact, USATT’s first ever live webcast at the 2009 USA Nationals used Dyyno’s technology. ICC (India Community Center) used Dyyno’s solution to broadcast their past three tournaments on the web. BATTF (Bay Area Table Tennis Federation) also live streamed their team league top division playoff in their 2009-2010 season, and will broadcast all their top division contests in the 2010-2011 season (12contests/60 matches).

This is by no means a comprehensive list of available technology, just an overview of some of the ones that I have used. I am sure there are many other types of technology that the table tennis community can use to its advantage.
Helping Young Kids Learn to Play with Correct Technique, Balance, and Power

By Sean O’Neill

“I always knew you would be a strong player. I could tell from the way you played against Scott as a kid,” USATT Hall of Famer and TV commentator Jack Howard shared with me recently. Many veteran Topics readers might remember the numerous junior battles I had with my arch-rival Scott Butler, but most don’t realize that, at one point in our early careers, Scott led the series, 12–3. However, if you watched how our contrasting games develop, it really made sense. Scott had an outstanding table game and really controlled the angles; while I tended to be forehead-topspin oriented and went for big shots. Scott’s rating was substantially higher than mine when we were 12, as he had a much more balanced game. Scott’s backhand, which he learned from his father Richard, was rock solid, whereas my first coaches focused on my forehand loop and footwork.

As we both left the cadets, major changes took place in our games: my loops began to have some force behind them, and Scott’s angles didn’t seem so extreme. The series then changed to my favor as my game was now a bit more mature, and Scott needed to adjust his game to play a more offensive style of play. Ten years after our first match against one another, our games fully matured, and together we won a silver medal in the team event at the 1987 Pan American Games. For most adroit coaches, this is really nothing new. All cadet players go through an adjustment period where they must alter their strokes as they grow and get taller. The challenge has always been when to teach strokes that they must alter their strokes as they grow and get taller. The challenge has always been when to teach strokes that

don’t really work today, but will in the future. I believe this question has a new answer, but first let me change sports for a minute to illustrate why our sport has been behind the times.

In elementary school, you probably played on an eight-foot basketball hoop that allowed you to shoot the ball, instead of the standard ten-footer, which would require you to throw the ball. If you played PeeWee football, the label on the ball said “Wilson K2,” which made it easier to throw a spiral since you could wrap your small hands around the ball. From baseball with small fields to volleyball with lower nets, it seems like the rest of the sports world figured out what it has taken us forever to learn: make the equipment and field fit the age of the athlete.

This past week, the Portland Table Tennis Club delivered a new Double Happiness Rising Star (Model T2125) to my home, courtesy of Li-Ning USA. This table can be lowered from the standard 76 cm height to 66 cm. You might think that 10 cm (or 4 inches) really isn’t that much, but tell that to a mini-cadet that wants to hit like the Pros, but can’t since the table is up at chest level. Double Happiness isn’t the only manufacturer that understands our future stars often start out in elementary school. A quick Google search showed me that Cornilleau, DONIC, Double Fish, JOOLA, and Stag all make adjustable tables. Some have two settings and others have three to take it down to 60 cm. Hooray! I firmly believe that if you are a coach or club that is serious about junior development, then you must encourage the smaller kids to play on a table that fits their needs, so that they can learn proper strokes, balance, and power. While Scott and I had high ratings for our age, they would have been much higher if we could have learned on tables that fit our height. I am sure Scott’s forehand loop would have developed faster, and I know I could have stayed closer to the table knowing that my loop drives would have used more body and less arm. So here is the challenge to USA Table Tennis: let’s add a permanent event to our Junior Nationals for kids under the age of nine to be played on a table that will allow them to play with adult technique. And a challenge to all families and coaches with students under nine years: invest in tables that will grow with your kids so that they can truly enjoy the sport.

Adjustable tables and their heights:

- Cornilleau Pro Evolutive: 76, 68, 60 cm
- DHS Rising Star (T2125): 76, 66 cm
- DONIC Triflex: 76, 70, 64 cm
- Double Fish 01-401 & 402: 76, 68 cm
- JOOLA Variant: 76, 70, 64 cm
- Stag CTTA Adjustable Height: 76, 71, 66 cm

Fig. 1: Four-year old Kaitlyn O’Neill sporting an adult-size racket on an adult-size table (76 cm high). No strokes are possible, only blocking the ball.

Fig. 2: Kaitlyn with junior paddle on adjusted table (66 cm high). Ready for action!

Fig. 3: Eight-year old Jeffry Zhang of Willamette Table Tennis Club in Salem, Oregon, striking a forehand on an adult-size table (76 cm high). Notice the straight legs and high elbow position. This will cause the shot to use the triceps muscle more and very little weight transfer.

Fig. 4: Jeffry on an adjusted table (66 cm high). Notice the bent knees, natural elbow position, and waist rotation. This will allow for more of a backswing, lower contact point, and better follow through. This table height will utilize the correct use of the biceps muscles and weight transfer.
Coach Mentoring Guidelines Using Technology

By Donn Olsen

Instruction in the field of table tennis coaching may be viewed as one of three types:

Course conductor training: This instruction trains coaches to conduct coaching courses to develop coaches. As an example, I recently completed the ITTF Coach Conductor Course, led by the ITTF Development Director Glenn Tepper, to become accredited to hold ITTF Level I coaching courses.

Coaching training: This instruction trains classic participants to be coaches. The ITTF Level I Coaches Course held at the U.S. Olympic Center in Colorado Springs in September, 2010, also conducted by Glenn Tepper, is an example of this type.

Player training: This instruction provides direct guidance by coaches to players. This occurs in a variety of sessions types, including one-on-one coaching, group training directed by a coach, and camps.

The second item above has an important, though neglected, correlated function—coach mentoring. This is the consulting role guidance a mentor provides a coach.

This article will present a few guidelines for coach mentoring, including a discussion of the use of technology as a valuable means of communication. The two roles used in this article are mentor and coach. I will use a recent mentoring project I conducted with Coach Stephen Freedman in Hawaii as a frame of reference. I have based my mentoring on a book I wrote—PATT - A Principles Approach to Table Tennis, containing a system of thought on how to play table tennis from the perspective of a systematic study of the fundamental principles of the sport.

COACH MENTORING GUIDELINES

Compatible coaches: The mentoring process requires a close collaborative relationship between the mentor and the coach. Among the mentor qualities that produce the best results are high quality communication skills, a genuine commitment to assist the coach’s players, and a generosity in providing detailed seed and thorough analyses. The best coaches for this activity are receptive to observations from the mentor, possess effective communication skills, and have sufficient experience with their players to reflect upon the direct coaching interaction.

Stephen’s strong background in PATT and his clear devotion to helping his players made our collaboration highly effective. Video analysis was the key means of communicating the playing characteristics of his students. He handled the video recording responsibilities expertly (including the uploading to YouTube), with excellent viewing angles for analysis. In addition, we share a life-long interest in philosophy that assisted in relating to a principles approach to our discussions.

Shared vocabulary: Coaching requires precise expressions. Table tennis is notorious for a less-than-rigorous communication mode. The mentor and coach must be capable of communicating using terms that have agreed-upon definitions. Absent that, the dialogue is reduced to a degree of unclear generalization not conducive to effective understanding.

PATT contains a specialized vocabulary and system of thought that contributes greatly to the communication between Stephen and me. Due to this, much ground was covered succinctly.

Marshall McLuhan, the great mass media scholar, indicated that books are a technology. In this case, a published book served as a key technology component.

Iterative process: Mentoring requires an iterative process between the mentor and the coach. Because progress is incremental, a continuing dialogue of information exchange is needed for this progress to continue. Email is recommended as the core means of written communication when the mentor and coach are not colocated and as a supplemental means when they are colocated. The benefits of email include providing an excellent way of documenting the dialogue and the instantaneousness of the technology’s delivery system.

Stephen and I developed an extensive set of emails during our project. My typical email needed to be studied; email, as a written form of communication, afforded him this opportunity. In addition, the immediacy of the delivery system facilitated rapid responses. His highly successful coaching practice during this engagement testifies to the important contribution of this technology.

TECHNOLOGY USAGE

The following technologies were used in the coach mentoring project:

Email: As a means of documenting the mentoring process, coupled with the delivery of immediate communication the medium, email is a valuable tool for a close collaboration such as coach mentoring.

Video: Documenting the player’s action in video creates a shared resource functioning as a major information reference.柯

milling this information with the attending coach’s observations creates a foundation for analysis.

YouTube: A video sharing website facilitates video access for all participants.

Books: Books or, more broadly, non-digital and digital reference material containing a table tennis vocabulary and system of thought that is embraced by the mentor and the coach greatly improves communication quality and the mentoring results.

Taking the right structural approach to coach mentoring, with particular emphasis on the methods used and the technology employed, will improve the process prospects significantly. Prior to a mentoring project, discuss with the coach the general outline of your interaction so that there is a clear understanding of the path ahead.

One final note: While technology is a critical part of the project, the attainment of the ultimate goal of player improvement will be directly determined by the instructional quality of the attending coach and your contribution to this effort.

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HOW PLAYERS DETECT THE SPIN OF THE BALL DURING THE RETURN OF SERVE IN TABLE TENNIS

In 2007, Italian doctoral candidate Bruno Bianchi obtained a fellowship to continue his doctoral table tennis research project at Brown University in Providence, Rhode Island. During his year in the United States, Bianchi used volunteers from Rhode Island and Massachusetts including players from the Brown University table tennis team and the Rhode Island Table Tennis Association club. He returned to Italy in 2008, completed his research in 2009, and excerpts from his study have been published in an ITTF publication.

In the study, players were asked to watch a series of video clips showing the service of a ball and the partial trajectory of that ball. Subjects were then asked to indicate with a key stroke where the ball would have landed had it continued on its course. As the video clips continue, portions were removed so that one had to determine the flight of the ball without seeing the paddle, or the body of the server, or the ball.

Abstract
It is well documented that the accurate motor responses of table tennis players are based on a visual system that functions as an efficient sensory and perceptual process. Information is first obtained from the visual system and then from the body and the paddle. The results of the first experiment showed an increase in performance before the paddle and the ball were both in contact with the paddle and the ball. In the second experiment, a decrease in performance was observed when the paddle and the body of the player were occluded. These results show that, for both novices and experts, the most important cues in detecting the spin of the ball are those that come from the paddle just before impact time.

Introduction
This work analyzes the relationship between visual perception, sports performance, and anticipation skills. Improved technique in table tennis has decreased the number of hits per rally. For this reason, serves and returns are of primary importance. According to some studies, ball speed can reach 160 Km/h and racket spins can reach 8000 rpm. On the other hand, motor response is very important, but visual selection of significant information at the right time is as well.

Therefore in two experiments, we used temporal and spatial occlusions in which the task was for players to predict the directions of the spin of the ball. Four kind of backhand serves where used: down spin, top spin, back spin, and side spin. The results of the first experiment showed an increase in performance before the paddle and the ball were both in contact with the paddle. In the second experiment, a decrease in performance was observed when the paddle and the body of the player were occluded. These results show that, for both novices and experts, the most important cues in detecting the spin of the ball are those that come from the paddle just before impact time.

Procedure: The test was run on a computer laptop (Dell Inspiron 1501, Athlon Dual 1800Mhz, Video Card ATI 1150). Participants were seated approximately 60 cm away from the screen (15” 4 resolution 1280×800) they had to press the F5 button with a finger on their left hand to verify each trial and answer with the right-hand finger using a four-button key paddle. The experimenter monitored the F5 responses. For each condition, we used 4 services x 6 repetitions design. The subjects were required to watch 96 video clips and predict the different kind of serve.

Data analysis: We measured the percentages of correct answers for the variables of expertise, occlusion, and type of serve. The data with an arcsine transformation was analyzed in a two way ANOVA with expertise as a between-subjects factor and occlusion as a within-subjects factor.

Results: There was a significant main effect for expertise with the expert group showing a superior performance compared to the novice group in each of the conditions (F(1,28) = 25.35, p <0.0001). For both groups the trend was similar, before T0 there was an increase in performance and after T0 the performance peaked (F(4,112) = 46.56, p <0.0001).

Conclusion
The serve at the start of the game is a very powerful stroke in modern table tennis. This kind of stroke can differ for speed and spin, and can include serves with backhand or forehand spins used with forehand or backhand. In 2001, to reduce its power, the International Table Tennis Federation introduced new rules intended to increase the number of hits per rally for the purpose of enhancing spectator interest in the game. In particular, turning became obligatory each two points instead of five and masking that consists in covering the descending trajectory of the ball with the free arm is no longer allowed. In no other sport does the ball rotate so quickly as in table tennis. Brad, Fleury, and Goulet (1989) studied subjects’ ability to identify the type of serve delivered (flat, top-spin, sliced) as fast and accurately as possible for each serve presented, though on tennis rather than table tennis. In a future project, we plan to verify if the kind of service, for example backhand vs. flat, has a different effect for expert vs. non-expert group in all conditions, F(1,40) = 41.78 p <0.0001. For both groups the trend was similar, before T0 there was an increase in performance and after T0 the performance peaked (F(3,120) = 14.27 p <0.0001).

The test was run on the same apparatus of the previous experiment and the task was also Experiment 2. The results point to the importance of the cues that come from the paddle and the body of the server. Considering these experiments together, there is support for the hypothesis that the crucial information for detect the spin of the ball comes from the paddle before the impact with the ball. The decreasing performance for body occlusion and paddle occlusion suggest that the body could be a reference point for the periphery of the visual system to select cues necessary for returning the serve.

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AND JUST FOR FUN...

by Steve Hopkins

With the interest in table tennis growing across the United States, visibility of the sport is growing as well. Evidence of this surge can be found in the recreational games and applications available for video game consoles, computers, and smart phones. A few years ago, Rockstar Games made a splash with their release of Table Tennis for the Xbox video game console -- and they quickly released versions for the Wii and PS2 and other home gaming systems.

For Wii gamers, there are now other table tennis options as well. The Sports Resort Bundle includes table tennis among other sports and Family Table Tennis is downloadable to Wii consoles in a matter of minutes. The popularity of table tennis as a Wii game has lead to the creation of Wii table tennis controllers. One company, Shinobi, recently developed a Wii accessory which appears remarkably similar to a real table tennis bat. Dubbed the TT Champion Bat, this Wii controller has the look, feel, and weight of a table tennis bat with the extra electronics needed for Wii games. It has been designed with high-tech motion technology that will translate paddle movements into proper torque and spin which is then relayed to the game’s software.

For iPhone, iPod Touch, and iPad users, there’s World Cup Table Tennis by Skyworks. The app is downloadable for just 99 cents; so for under a dollar you can be knocking a ball around just about anywhere.

I can’t say that mastering these games will translate into better table tennis in real life, but I do believe that the more table tennis is “out there” the better. I like that our sport is grouped with other sports in gaming packages; I like that kids are choosing to bat a virtual ping pong ball around (instead of shooting a virtual basketball or kicking a virtual soccer ball); I like that there is sufficient demand to have resulted in the development and marketing of these games; and I like that those with their fingers on the pulse of what is new and cool have begun to think of our sport when they are creating the next generation of diversion and entertainment for the American market.