Markus Gaebel · Mar 21

The Technical Evolution of Squash Glass Show Courts

*This article was produced in collaboration with Andrew Shelley from World Squash Library, the editor of **Squash Then And Now: A Celebration**, a lavishly-illustrated pictorial history of the sport, covering over more than 150 years.*

Squash's early years were characterised by fully enclosed courts that made it difficult to attract spectators, let alone cater to cameras and broadcasters. Over time, however, the desire for greater visibility—and the push to showcase the excitement of squash to wider audiences—drove significant developments in court design and materials. This article explores the evolution from the first glass back wall in the 1960s to today's fully transparent courts, highlighting both the milestones and the modern printing technologies used to perfect the viewing experience.

Early Attempts at Improving Visibility (1950s)

Initially, most squash courts had plastered walls that concealed matches from anyone not on court. In the 1950s, clubs began experimenting with small windows in the back wall (as seen in New Zealand between 1954 and 1956) or tiered seating behind solid walls (Cairo, 1958). Although these approaches were novel, they only offered a narrow glimpse into the court and did little to address the needs of media or mass audiences.

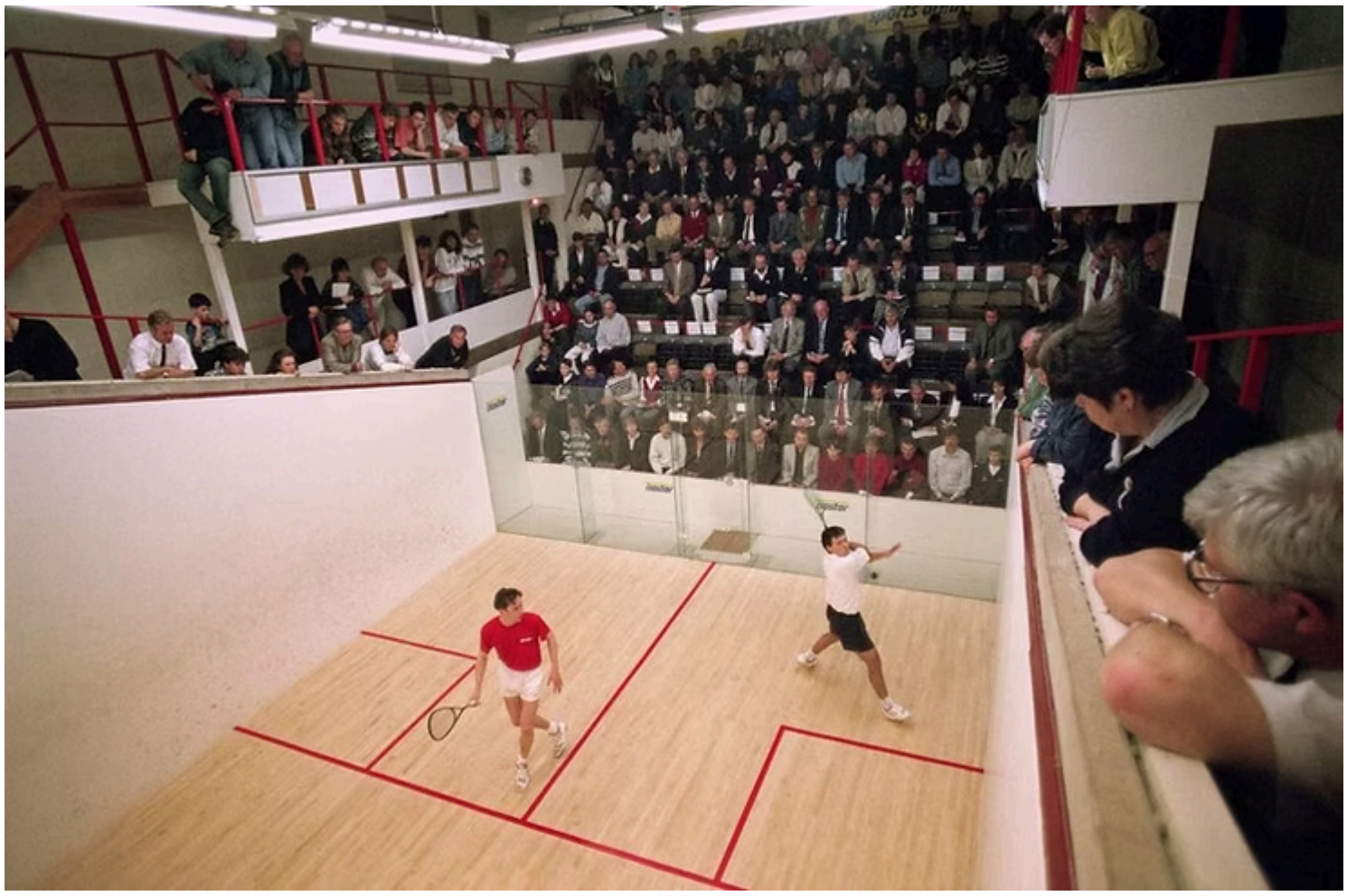
The First Glass Back Wall (1966)

A breakthrough came in 1966 at the Birkenhead Squash Rackets Club in the UK. Thanks to a collaboration with Pilkington Glass, the world's first squash court featuring a glass back wall came to life. This innovation represented a monumental shift, offering:

- Clearer viewing for spectators.
- Potential for photographic and television coverage previously unseen in squash.

The sports world quickly took notice. By removing the biggest barrier to spectator engagement, the glass back wall paved the way for a wider appreciation of squash as a competitive spectacle.

Refinements: Late 1960s and Early 1970s

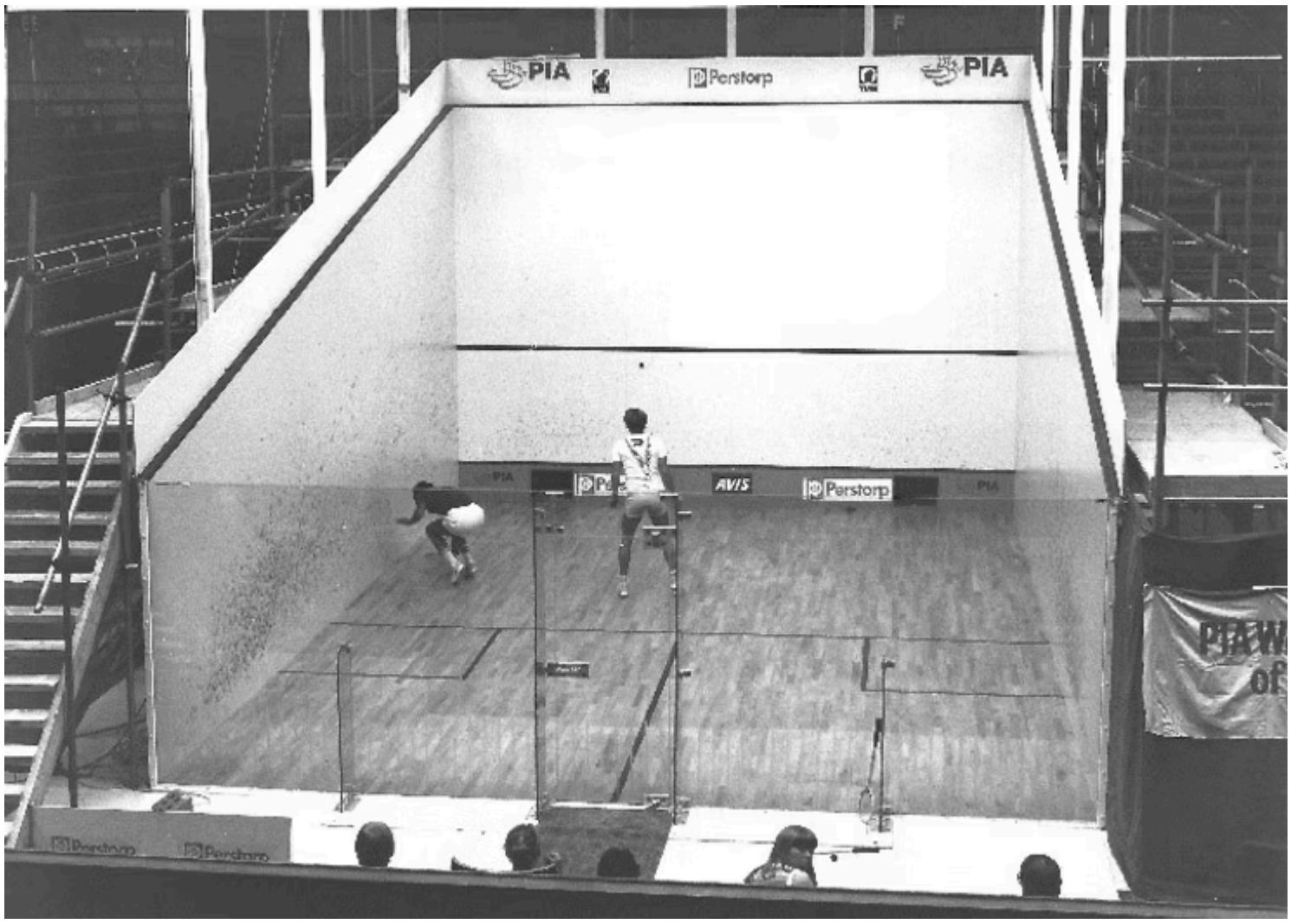


Abbeydale Park Sports Club in Sheffield with the first fully functional, toughened-glass back wall

Following the success at Birkenhead, incremental improvements in glass design soon followed. In 1971, Abbeydale Park Sports Club in Sheffield installed the first fully functional, toughened-glass back wall, which proved both resilient and visually appealing. By 1972, the British Open featured glass back walls, leading to:

- Increased attendance and subsequent growth in prize money.
- Substantial media interest, spurring professional squash forward on the global stage.

Portable and Demountable Courts (Late 1970s)



As interest in high-visibility squash grew, the late 1970s saw the introduction of portable or demountable courts, enabling large venues to host professional events. Notably, Swedish company Perstorp debuted a portable court in Stockholm that combined a glass back wall with laminate side panels. This concept reached a global audience at the 1979 Men's World Open in Toronto, proving squash could be showcased effectively in arenas and unconventional locations.

Fully Transparent Plexiglass Courts (1981)

The first fully transparent squash court, branded “Trans-Wall,” appeared in 1981 at the German Masters in Cologne, courtesy of Swedish company Andren & Sons. With plexiglass walls on all four sides, the court radically transformed the spectator experience. However, it posed two main challenges for players:

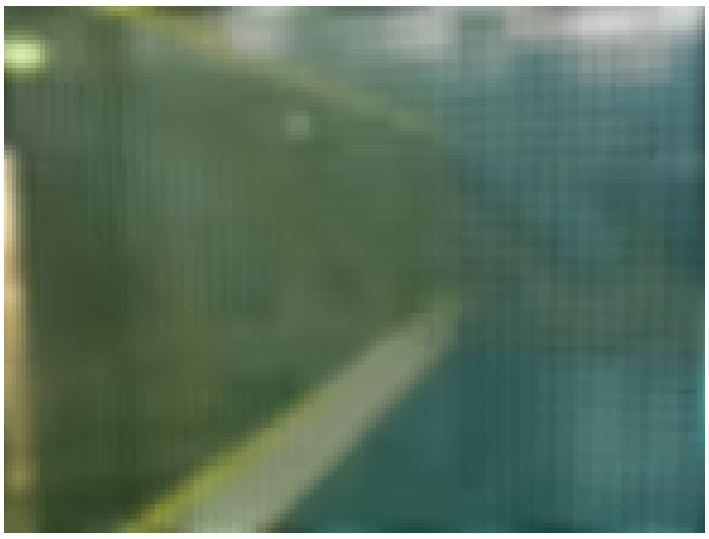
1. Depth perception—judging how close the ball was to the wall became more difficult.
2. Distractions—having a direct line of sight to the audience could break concentration in the midst of fast-paced rallies.

Despite these drawbacks, fully transparent courts quickly became symbols of squash’s ambition to bring the game closer to its fans.

Tackling Visibility and Distraction: One-Way Technology

In response to the issues posed by fully transparent walls, Roland Hill developed a special pattern of tiny dots—later known as “Contra Vision.” Squash players can see colored walls when inside the court whereas spectators from all sides have an unobstructed view of the game. This two-layer dot system (one black, one coloured) was applied to the players’ side of the glass:

- Player’s View: The dotted surface helped the athlete gauge depth, reducing mis-hits and wall collisions.
- Spectator’s View: From outside, the black backing absorbed light, creating a one-way vision that allowed the crowd to see the on-court action without distracting the players.



black dots facing outside

colour dots facing inside

Initially, these dot patterns were printed on a film that stuck to the glass. While effective, the film tore easily from racket impacts, leading to frequent—and costly—replacements of up to €5,000 per event. This limited the commercial viability of such solutions, even as they improved the playing and viewing experience.

From Plexiglass to 12 mm Toughened Glass (1988)

Although plexiglass was fully transparent, it scratched easily, causing clarity to diminish relatively quickly. In May 1988, the Men's World Championship in Amsterdam showcased a court made entirely from 12 mm toughened glass—considered stronger and more resistant to the wear and tear of competitive play. Despite initial concerns about breakage, toughened glass soon became the industry standard, supplanting plexiglass at top-tier events worldwide.

Burning the Dots into the Glass (Austrian Open 1998)

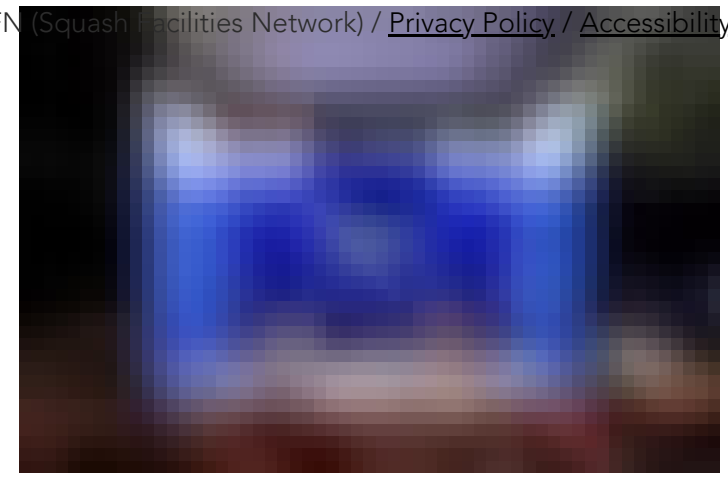
A major step forward occurred in March 1998 during the Austrian Squash Open in Salzburg. For the first time, the one-way vision dot pattern was baked directly into the toughened glass. This advancement eliminated the need to replace film-based applications and significantly reduced ongoing maintenance expenses. As a result, courts now combined the best of both worlds: minimal distraction for players and optimal visibility for fans.

Today's Printing Technologies for Glass Courts

Beyond the shift to toughened glass, printing technology has advanced rapidly, offering organisers a variety of methods to apply one-way vision designs or branding onto the court walls. Each method has its own merits regarding cost, durability, and vibrancy:

1. Screen Printing

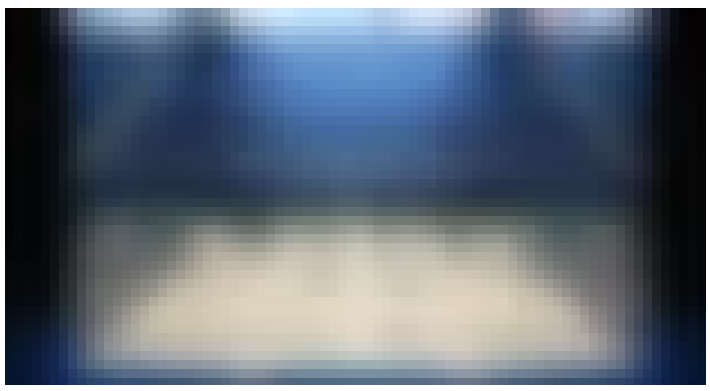
   This traditional method involves applying ceramic inks onto the glass surface through a fine mesh screen, then baking the inks at high temperatures. The inks become part of the glass, resulting in a scratch-resistant, durable design with solid colours.



glass show court with screen printing

2. Digital Printing with Ceramic Inks

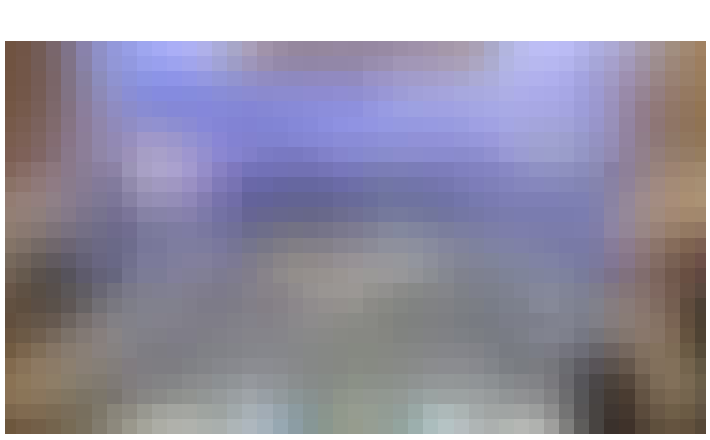
   Specialised printers apply ceramic inks directly onto the glass, which is subsequently baked. This produces high durability and vibrant imagery, and the digital approach allows for detailed or custom designs.



glass show court with with digital printing with ceramic inks

3. UV-Curable Inkjet Printing

   In this process, UV-curable inks are printed onto the glass and immediately hardened under ultraviolet light. It's fast and doesn't require additional baking, making it more cost-effective, although the resulting print tends to be less robust and may not match the colour richness of ceramic inks.



glass show court with UV-Curable Inkjet Printing

Why These Methods Matter

In glass squash courts, ensuring the outside environment remains relatively dark is crucial for maximising one-way vision. When event organisers can't fully control ambient light, the printing technology used (particularly on the inside of the walls) becomes critical to maintaining visibility for both players and spectators. Ceramic inks provide superior resilience and clarity, but the production costs are considerably higher. Consequently, many new courts opt for the less expensive UV-curable inkjet printing, even though the overall quality may be lower.

Conclusion

From the small windows of the 1950s to today's advanced, fully transparent showcourts, squash's evolution toward ever-greater visibility reflects its commitment to captivating audiences both in-person and on screen. Key milestones—such as the first glass back wall in 1966, the introduction of toughened glass in 1988, and the development of one-way vision technology—have all dramatically enhanced what fans and broadcasters can see.

Despite these achievements, the core technology underpinning glass-walled courts has changed little since the late 1990s. Cost pressures often drive clubs and promotors to opt for UV-curable inkjet printing, which, while cheaper, can result in milky walls and insufficient one-way vision, creating distractions for players and diluting the viewing experience. Ironically, newer printing methods have therefore led to a decline in quality compared to what was once possible.

For top-tier events where broadcast excellence is paramount, investing in baked-in ceramic ink solutions remains the gold standard. By delivering the highest clarity and consistency, ceramic-based one-way vision preserves the stunning transparency that first made glass squash courts so revolutionary, ensuring that both players and spectators can enjoy the game at its best.