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**BOOTHLESS
CINEMAS**
is less more?



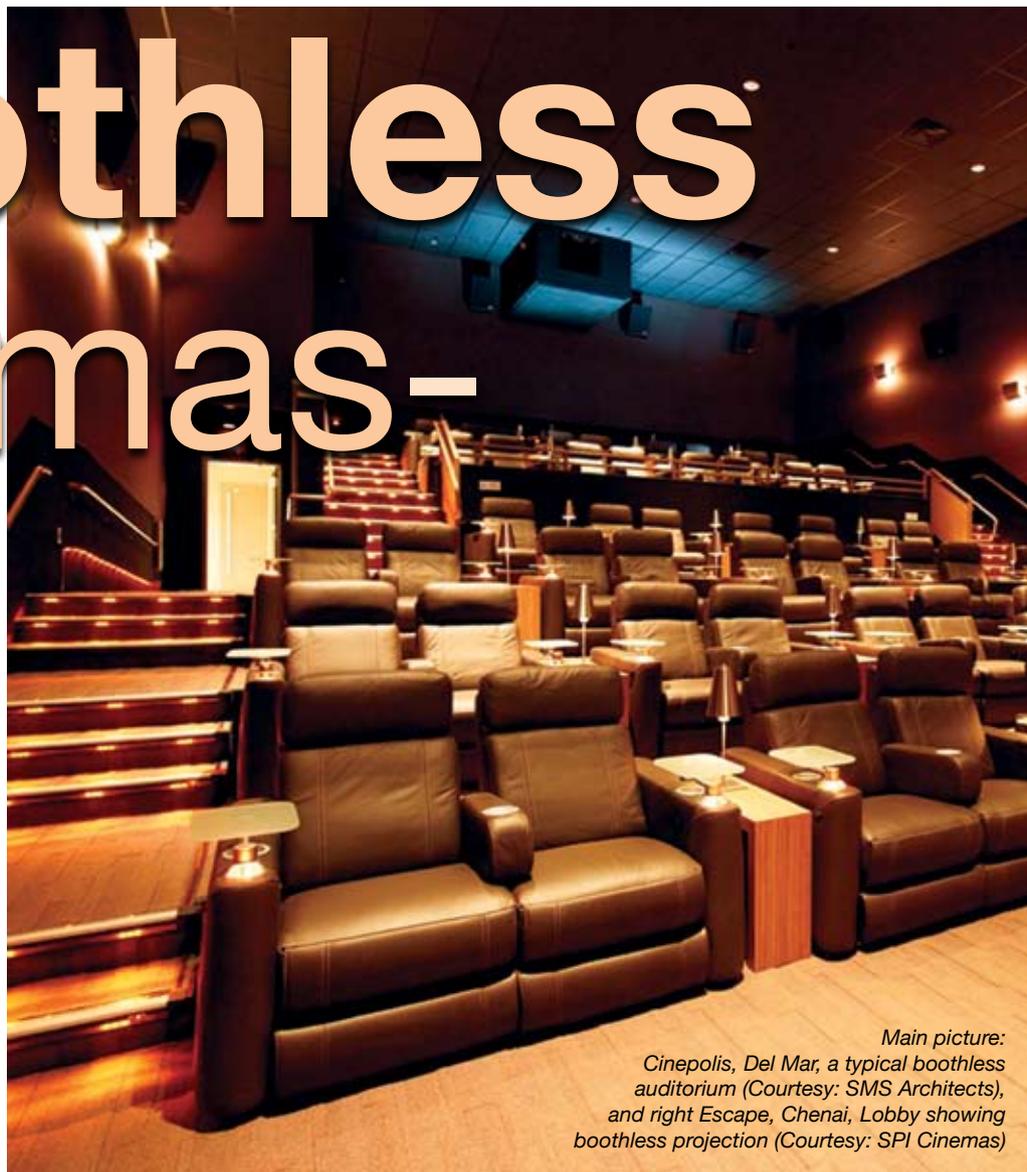
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Boothless cinemas - is less more?



by *Bill Chew*



*Main picture:
Cinepolis, Del Mar, a typical boothless
auditorium (Courtesy: SMS Architects),
and right Escape, Chennai, Lobby showing
boothless projection (Courtesy: SPI Cinemas)*

'Less is more' was a popular design mantra when I was completing my architectural studies in London. The phrase was attributed to Mies van der Rohe, the internationalist architect, more famous with Philip Johnson as the designer of the Seagram building in New York. Seagram was, of course, a landmark skyscraper located in Park Avenue and completed in the late 1950s. It served as a model for skyscrapers which many architects at the time sought to emulate. I can remember vividly the



partners in the practice that I worked for in 1970, GMW, flying to New York just to observe and learn how the building looked, functioned and performed (literally by standing below the building!).

Those were the archaic days before the Shard and introduction of BIM (Building Information Modelling), algorithms and software and when everything else was much more empirical. 'Less is more' embodies the idea that simplicity and clarity can lead to good design which is no bad thing. As we shall see, 'less is more' can equally be applied to the design of cinema buildings - we will find out more later.

In this first part of the article we will look especially at boothless designs in the USA and in India, and in the second part, to be published in the next issue of Cinema Technology magazine, we will examine how boothless developments in the UK are progressing.

The design of cinema buildings has undergone a massive transformation in its 110 year history. Initially mimicking the music halls from which they were derived, they progressed through the sumptuous Art Deco picture palaces of the 1930s, lived through the nadir of the '60s and '70s when cinema exhibition faced stiff competition from television and cinemas were frankly quite badly designed, dull and depressing, through to the revival from the mid-1980s onwards when post-modern multiplexes arrived at retail parks and Hollywood blockbusters came on the scene. The late '90s and the early years of the 21st Century, I believe, brought about more introspective, better designed and sophisticated cinema buildings by some cinema architects. The improvement coincided with architects paying more attention to the design of this particular built form, perhaps relating the cinema building itself better to its surroundings and context. So it is not the least surprising to learn that cinemas will continue to re-invent them-



government and the major manufacturers through persuasive and clever marketing techniques. Therefore the writing was on the wall for all to see and the demise of analogue was inevitable. The consign-ment of equipment such as the 35/70 mm projectors, cakestands, rewind benches and other anachronistic items of cinematographic hardware (sadly only much loved and admired by curators and cinema buffs) to cinema museums finally sealed the fate of analogue cinema. With the advent of digital cinema technology, a new cinema building sub-type was born - 'the boothless cinema'.

A few years ago nobody had even heard of boothless cinemas. Now everybody is talking about them in the cinema press, at conferences and trade shows.

So what are boothless cinemas and how did this development come about all of a sudden and why are they spreading rapidly around the world? Is it a phenomenon which will stay for the next decade or more? What are the advantages of boothless to the exhibitor and are there any disadvantages?

I will endeavour to address some of these issues and hope that further debate and discussion can follow in CT by readers. The articles (Parts 1 & 2) will be illustrated with recently completed projects from the United States, India and the U.K. From desk top research undertaken for this piece and talking with people at the recent Cine Europe in Barcelona who are involved with boothless it is fair to say that the concept is catching on pretty much globally as we can expect in the Twitter and smartphone age we live in. Apart from the projects

featured, my understanding is that some others are already at the planning stage initiated both by cinema owners and the digital cinema industry alike. As more projects are completed, greater knowledge and experience will be gained and more inventive and even fantastic ideas for boothless designs will come to light. If any readers know of other unique or interesting projects, I should be pleased to hear from them. Perhaps a further article can follow later.

The boothless cinema as a phenomenon occurred almost simultaneously in different countries probably about 3½ years ago. In this respect it has parallels with the birth of cinema technology itself in the late 1890s and early 1900s when cinema experiments carried out by the Lumière brothers in

France coincided with Edison demonstrating his 'kinematograph' in America.

Boothless Cinemas

So how did boothless come about and what were the factors contributing to the idea taking hold? Initially digital projectors and their attendant servers sat alongside analogue in the projection booths and these were manned by projectionists. The original digital projectors were huge pieces of kit much like the 35/70 mm equipment they sat beside. The projection booth itself was derived from the early days of commercial film exhibition when nitrate film was used (nitrate film was both flammable and explosive) and local authorities, responsible for public safety, required exhibitors to provide a fire resistant room (with portholes also having steel shutters connected to a fusible link) kept separate from the auditorium to house all projection equipment, sound racks, rectifiers, standby batteries and so on.

However when analogue projectors were in the process of being phased out and the design of digital equipment gradually improved (they became smaller in size, lighter and therefore easier to support and suspend from the ceiling rather than having to be positioned on the floor), it rapidly became clear that the *raison d'être* of the booth had virtually disappeared or, at least, was becoming less relevant. There was a further assumption that relevant issues relating to fire and sound containment and ventilation to the projector could be satisfactorily resolved. This time the newer digital projectors required less attention and lower levels of maintenance, making it more feasible for the projectors to be positioned in less accessible locations. The newer fans employed for cooling these projectors were quieter, thus acoustic requirements became less of an issue and more manageable.

There are further important points to note in respect of digital cinema - with no film to load there is clearly nothing for an operator to do alongside the projector anymore. No gate changes are required, refocusing needed, emergency film splicing or loop-forming needing to be performed before a penthouse digital sound reader. Unless and until the projector fails there is absolutely no need for a human being to be present!

Automation spreads

The advent of boothless cinemas was also helped by a combination of other separate factors occurring simultaneously. The first is the development of automation in everyday life, i.e. using machines to do the work of human beings. Although automation was first evident in the early 1960s (when

selves. This time, however, the changes will be driven largely by rapid advances in technology as well as changed attitudes- like everywhere else in society these days!

A recent newspaper headline announces that 'All UK Cinemas will be digital by 2013', adding that in the UK two thirds of cinemas are already digital. According to analysts at IHS Screen Digest 'celluloid could disappear as early as 2013'. Thus changes in the industry are happening at an alarming rate.

Digital projection was first introduced around 12 years ago and, although take up was initially slow and patchy, the last 6 or 7 years have witnessed huge changes which have been forced through the industry by

robots were employed to make cars) things have progressed very far down the road to the extent that we now have many retail establishments with automated check-outs thereby reducing the number of staff required to manage a shop or supermarket. This inexorable move towards automation has seeped through many areas of society and it is unsurprising to learn that the cinema industry too has not escaped. Secondly, technology has come of age, especially amongst younger members of society who have grown up with computers, smart phones and other electronic gadgets. So the idea of running and operating several screens in a digital cinema from a laptop or other similar device, although unthought of a decade ago, is no longer such a radical idea or unattainable objective.

With everything under automation control the show can run itself. Even the opening or closing tabs (if these are still around) and auditorium light dimming can be managed by the same scheduling software in a computer. There is of course still the need to load the digital 'films' from the hard disc (if this is the form the digital content is received by the cinema) into the cinema's servers, and someone has to decide (and program) the film choice and timing of each auditorium day's programme. In multiplex installations, the same scheduling computer can also load that information onto foyer signage and displays so that everything is kept up to date and reflects what will be shown on each screen and at what time, which can of course be instantly changed when required.

The business case

Other important commercial factors have spurred the move towards boothless. Less space is required to build cinemas and in countries where rental space attracts a very high premium this becomes a significant factor and can tip the balance as to whether a cinema project proceeds or not. Sean James, Vice President of Christie Managed Services states 'I think boothless will continue worldwide and will have the greatest success where real estate is at a premium'. Another way of looking at boothless is that space previously taken up by the booth could be used to provide additional seating, hence generating further income for the cinema. Another significant trend which can be discerned in boothless cinema projects in the States and India that I have researched is the link between boothless and the concept of the Luxury Cinema. I had previously written about the trend for luxury cinemas when covering the Electric Cinema in Portobello Road, London (CT, Sept.2003), but the

present concept of luxury cinemas has been taken to an entirely new level with boothless projects as we shall see later.

Concurrent with the digitalisation of cinemas and the possibility of positioning servers, amplifiers and sound racks in separate and remote 'comms' (communications) rooms have meant that the role of projectionists in cinemas is increasingly at risk as nowadays everything relating to the operation and functioning of a cinema can be controlled from a laptop using appropriate cinema management and scheduling software. This is now an important and pressing issue which the major cinema operators are having to deal with via re-training programmes as well as other initiatives to retain their best staff.

Cinepolis Luxury Cinemas, USA

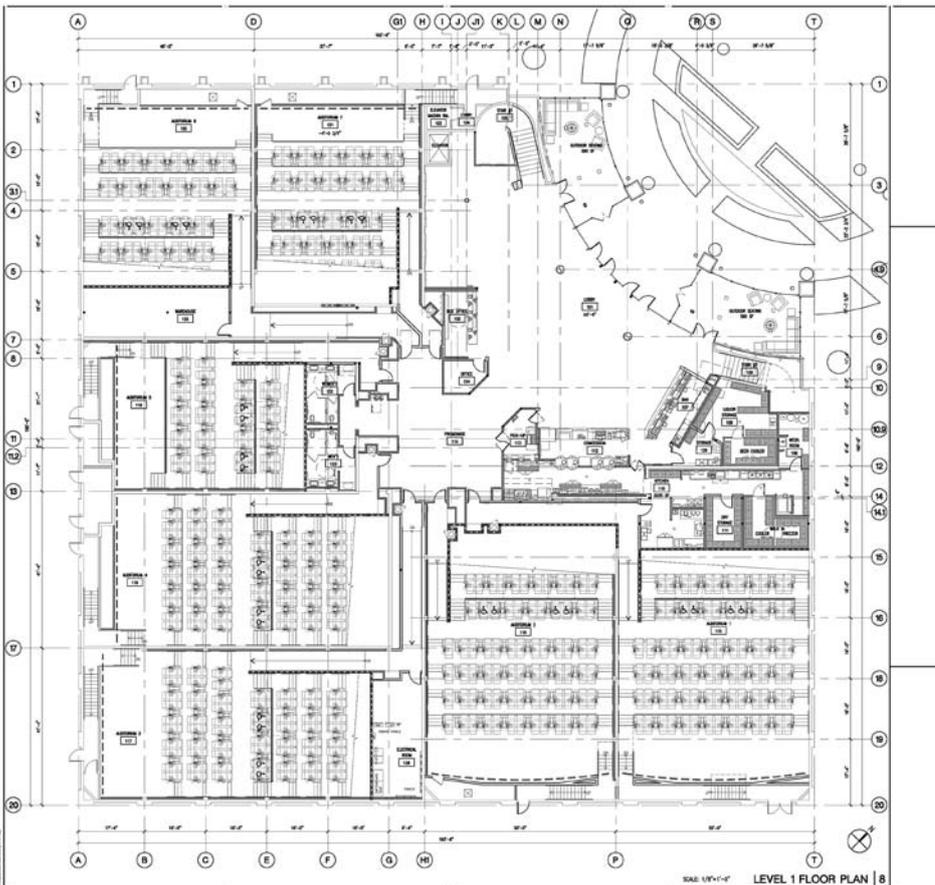
One of the first companies in the United States to experiment with boothless and the luxury cinema concept, developing various sites in California, is Cinepolis, the Mexican cinema operator. The company, founded in 1971 under the name of Organizacion Ramirez, operates cinemas in the USA, Mexico, Central and South America and India and is ranked 4th in the world in terms of the numbers of screens they operate globally (2795 screens in 303 cinemas as at the end of January 2012). In 2010 the company recorded 134.1 million admissions worldwide in their cinemas and it employs over 18,000 people globally. The company's 'mission statement' is 'to be the best option in entertainment, strengthening our international leadership in the film industry, providing happiness, innovation and a stellar service'. To achieve these objectives, Cinepolis have formed key partnerships with major companies in the leisure sector. Cinepolis shows first run 2D and 3D films in

high quality environments and offers their guests an innovative range of snacks, food and beverage products. International companies not only create wealth but have a strong sense of corporate social responsibility (CSR) details of which can be found in a company's annual report. At Cinepolis one of their main CSR programmes is helping the disadvantaged in Mexico to regain their sight. Much has been achieved to date with this programme.

When Cinepolis took the decision to venture into the United States they selected Christie as their partner to provide an all-inclusive turnkey solution with a special scissor lift system enabling the Christie CP2220 DLP Cinema Projector to be positioned out of the way during normal operation and lowered for maintenance. A recent press report stated that 'Christie was selected because of their many years experience in the exhibition industry and perfect understanding of old world traditions of the finest movie houses coupled with the sophisticated demands of today's discerning movie goers'. The Christie turnkey system has been installed in the three cinemas opened to date – at Del Mar (July 2011), La Costa (February 2012 and pictured below) and Ocean Ranch (June 2012), with sites at Rancho Santa Margarita and Thousand Oaks due to open in August 2012. The architectural firm selected by Cinepolis to undertake the comprehensive remodelling of these existing cinemas into luxury cinemas was the Californian based company SMS Architects, who specialise in various sectors including entertainment, mixed use and hospitality. SMS Architects was formed in 2009 by 2 principals Greg Siminoff and Joseph Smart who have worked together in architecture for many years.



Courtesy SMS Architects



Layout plans of boothless multiplex for Cinepolis Ocean Ranch, Courtesy SMS Architects.

Greg Siminoff stated: 'The remodels are quite extensive as often we have to gut the whole interior and sometimes deleting the entire mezzanine floor as well. At Westlake in Thousand Oaks we have provided a catwalk system which allows service to the

projectors with a minimum amount of space thereby eliminating the requirement for a scissor lift'. He further adds 'In our luxury cinemas we end up with approximately 40% of the seating that existed originally at the old cinema' and 'if we were not concen-

trating on luxury cinemas we would be able to increase seating capacity with this (boothless) concept'. Typically, for example, as at Ocean Ranch which is a 7 screen remodel (housed in 35,000 sq. ft. and providing the 'ultimate in movie palace experience') the cinema would consist of 619 fully reclining leather lounge chairs. The largest screen has 121 seats and the smallest 65 seats. Waiters serve guests within the reserved seats in the auditorium or at seating areas in the lobbies. As in most luxury cinema concepts these days there would be a fully fitted and dedicated commercial kitchen located within the cinema premises, a notable addition from previous cinema planning. The construction time on remodels is approximately 6 months, according to SMS Architects.

Sean James of CMS says that they also worked with Sony Equipment to install a boothless 10-plex in Missouri - B&B Theatre's Wildwood 10. This ground breaking boothless multiplex is powered by Christie Solaria™ Series digital cinema projectors. The projectors sat on platforms supported by beams that moviegoers could walk under, with the control room ('the heart of the digital cinema system') set in a remote location. Six of the ten Christie Solaria CP2220 4K ready DLP Cinema Projectors were also set up for RealD 3D presentations.

However this project appears to be a one-off and the main proponent of boothless cinema design in the United States remains Cinepolis who have not only introduced this innovative concept of the Boothless Luxury Cinema to the exhibition industry but other innovative concepts as well, such as Cinepolis IMAX, edutainment with CinemaPark, etc.

So what are the issues associated with the boothless projection housing and how did CMS address them? Again, Sean James explains: 'the two challenges we faced with Cinepolis were controlling ambient air temperature and isolating equipment noise from the audience'. Controlling the temperature around the projector was achieved by sealing the projector enclosure off from the plenum air and designing a supply duct from the controlled auditorium air. To allow adequate auditorium air flow whilst isolating equipment noise CMS located the auditorium vents away from the audience and used duct liners and attenuators. The 'boothless box' whose size is approximately 140 cm x 120 cm x 260 cm (H x W x D) was constructed out of 150 cm jumbo aluminium studs and 2 layers of dry wall panelling. The inner faces of the box were further lined with sound absorbent material.

Top left: Cinepolis Cinemas, Ocean Ranch - Lobby area and below boothless cinema under construction. Courtesy SMS architects.

Right: Christie boothless projection at Cinepolis Del Mar, Courtesy Christie Managed Services



As noted above, Cinepolis also operate cinemas in India away from the USA, Mexico and South America. I understand that the boothless concept is now being considered by them for some projects there (although this has yet to be confirmed).

SPI Cinemas, Chennai

According to Wikipedia it was reported that at the end of 2010 'in terms of annual film output, India ranked first followed by Hollywood and China'. It comes as no surprise then that, like America and western Europe, India has had cinemas since the very beginning of film in the early part of the 20th century, including such Art Deco gems like the Liberty Cinema in Mumbai completed in 1949 two years after independence (hence the name 'liberty'). India has a population of 1.5 billion so it is virtually impossible to determine how many single

screen cinemas there are in the country. However since 2000 when India's hitherto exorbitant entertainment tax structure was reformed, the scene has been set for inward foreign investment and the ensuing multiplex revolution. At the same time, with India being in the BRIC 'club of nations' prosperity grew year on year and the bigger cities and conurbations continued to thrive. It is therefore not surprising to note that a home grown success story is at the forefront of the boothless revolution in India. SPI Cinemas (formerly known as Sathyam Cinemas) was founded in 1974. The group currently operates 4 cinemas totalling 25 screens in the state of Tamil Nadu in the southern tip of India. Three of the cinemas are in Chennai with one in Coimbatore.

The organisation focuses on providing it's customers with 'a superlative movie viewing

experience by exhibiting films in settings never seen before' says Preetha Ramaswamy, the company's PR spokesperson. SPI Cinemas is also at the vanguard of media technology and was the first exhibitor in India to introduce digital projectors under the brand RDX (Real Digital Experience) supplied by Qube Cinema Inc.

The group's portfolio consists of the legendary Sathyam Cinema (the first multiplex in India to have state of the art digital screens and concept restaurants), Escape (Chennai's first 'destination' luxury cinema complex with amenities such as spa, library, premium dining, gaming lounge and other facilities), thecinema@Brookefields and the recently launched 6 screen multiplex in Coimbatore, S2.

Escape Cinemas is a 1300 seat, 8 screen multiplex located on a 40,000 sq.ft. footprint in one of Chennai's latest shopping malls, the Express Avenue Mall. The interior decoration of the cinema was considered to be paramount and the work was contracted to two well-known and respected designers - Giovanni Castor (Castor Design & Associates in California) and Vikram Phadke, a renowned designer from Chennai. Whether one likes these cinema interiors or not is a matter of personal taste and preference. However I am sure the Indian audiences love it!

The marketing department went into overdrive and came up with names like 'Plush', 'Streak', 'Blush', 'Carve' and so on for each individual auditorium and hence the interiors were designed based on these specific themes. The cinema opened in August 2010 to great success. The seating capacity of the various screens ranged from 110 seats in the smaller to 310 for the larger auditoria. How did 'boothless' come to be adopted in India? Senthil Kumar, co-founder of Qube Cinema, believes that 'once digital cinema was adopted, it was the cinema owners who pushed to economise on the space, thus prompting architects and designers to respond'. Preetha Ramaswamy confirmed this by mentioning 'it was the owner of SPI Cinemas, Kiran Reddy, who advocated and initiated the company moving to a boothless environment. He saw it as an opportunity to innovate, not only to improve the design of sites, but also to significantly reduce both the building costs and rental of spaces previously occupied by projection rooms'. Rental is at a premium in Chennai as in other large cities and as Sean James of Christie has said, boothless will find success and be adopted in situations where real estate is at a premium.

Top: Escape Cinemas, Chennai: 'Plush' Auditorium and below, Escape, 'Streak' Auditorium (Pictures courtesy: SPI Cinemas)



It should come as no surprise that only the best technology was selected by the owner for Escape. The RDX system uses Christie 2K upgradeable digital projectors and 8 Qube XP-D servers. On the sound side L, C, R and subwoofer and auditorium surround speakers were channelled through QSC DCP-300 processors bringing in pure AES uncompressed audio, as their website informs. SPI Cinema's Kiran Reddy has been quoted as saying 'the Integrated Media Block greatly excites us because of it's support for 4K and high frame rate 3D (when available). Escape Cinema promises it's audiences a premiere cinema experience and no expenses will be spared in making sure the audiences get that'.

The system for boothless in Escape Cinemas differs markedly from Cinopolis in that the digital projectors were located behind the rear auditorium walls and at high level (approx. 8.3m) above the foyer area, supported on a clear platform hung directly off the ceiling and building structure. Portholes, as in a conventional booth, were provided on the rear walls in front of the lens. Thus this system allows cinema guests to view the workings of the digital projection system set-up, rather like the 'see-through' observation lifts fashionable in hotels from the 1980s. According to Senthil Kumar, re-lamping or any other maintenance required to be performed on the projectors is carried out by personnel using mobile scissor lift hoists (which presumably had to be stored away in a handy room nearby). Noise has

not posed a problem given the height the projector is located. The lamp is ducted to open air (to remove ozone generated by the projector) via 'kopex' flexible hoses. Senthil Kumar also confirmed that the site cleared fire safety regulations without issue but I am unable to ascertain whether heat or smoke detectors located adjacent and connected to the fire alarm system have been provided. I am also unable to determine where the 'comms' room is located within the premises as floor plans for the cinema could not be forwarded to me in time.

It seems that boothless cinemas have not only heralded a new cinema building 'sub-type' but have introduced new levels of sophistication and comfort into the cinemagoing experience. Now that HD, 3D and high quality pictures and sound are available for home cinemas (for those who can afford them and have the necessary space) cinema exhibitors are fighting back. They are providing big picture experiences in 2D and 3D deluxe environments and entertainment destinations, not unlike those presently found in the top hotels. As we have seen 'less is more' in boothless cinema design has given architects and designers the choice to express the building form more freely. I believe that we may yet see new forms of fantastic cinema architecture once this new freedom has been fully digested and assimilated.'

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Part two of this article, which will focus on boothless developments in the UK, will continue in the December issue of Cinema Technology magazine.

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Related websites of interest covered in both parts of the article:

- www.cinopolisusa.com
- www.sms-arch.com
- www.christiedigital.com
- www.bbtheatres.com
- www.escapecinemas.com
- www.qubecinema.com
- www.qsccinema.com
- www.thelexicinema.co.uk
- www.odeon.co.uk
- www.spacetailors.co.uk
- www.hmvcurzon.com