



مقالة بحثية

رؤية إبداعية بمطار سفنكس الدولي بين التراث والمعاصرة (صالة الخدمة المميزة لكبار الزوار) .

A Creative Vision at Sphinx International Airport
Between Heritage and Contemporary "Exclusive Service
Hall - VIP"

*هالة محمد حسنين

*أستاذ العمارة الداخلية المساعد ، قسم الديكور، كلية الفنون الجميلة، جامعة حلوان.

البريد الإلكتروني: hala_mohamed@f-arts.helwan.edu.eg

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المخلص:

يشير مفهوم التراث والمعاصرة في العمارة الداخلية في المطارات إلى إختلاف فلسفي في جميع الجوانب المعمارية والتصميمية والتكنولوجية عن المفهوم التقليدي في تصميم المطارات. يركز البحث على جزء فريد وهو صالات إستقبال كبار الشخصيات التي تقدم خدمات مميزة للمستخدمين. حيث قد جاء إختيارنا لمطار سفنكس الدولي الجديد الذي تم إفتتاحه بسبب موقعه الإستراتيجي بالقرب من منطقة الأهرامات الأثرية وبالقرب من المتحف المصري الكبير. إن مشكلة التصميم الحالي لصالة كبار الزوار محل الدراسة تؤكد على السؤال: أين الهوية المصرية المعاصرة بإعتبارها إنطباعاً رئيسياً يجب أن يستقبله الوافدون؟ حيث كان الجواب أنه "لا توجد إشارة طفيفة مباشرة أو غير مباشرة إلى تأكيد هوية المكان". والبحث يهدف الى التأكيد على ضرورة دمج التراث القديم بالحدثة لتحقيق هوية مصرية معاصرة من خلال الرمزية في التعبير لنقل رسالة ثقافية غير مباشرة تعبر عن عظمة الحضارة المصرية، لذلك يعتمد النهج الإستراتيجي المتبع على إجراء دراسات تحليلية لعناصر الفن المصري القديم وكذلك مناقشة الوضع الحالي لقاعة كبار الشخصيات لإعداد الإقتراحات التصميمية المناسبة. الورقة البحثية في النهاية توصلت الى نتائج من خلال تصميمات مبتكرة برؤية معاصرة لإعادة توظيف صالة كبار الشخصيات من خلال التركيز على الدمج بين التراث القديم والمعاصر لتحقيق الهوية التراثية بحدثة من خلال إعادة توظيف محددات العمارة الداخلية وعناصر التآثير ذات الصلة التي تقود إلى تصميم جديد يؤكد على إتجاه الحفاظ على الهوية ويرسخ قيماً ثقافية قديمة في أذهان الزوار.

الكلمات المفتاحية: التراث والمعاصرة؛ الهوية؛ الرموز الهيروغليفية؛ الوسائل والاتصالات عالية التقنية

1. Introduction

Within the framework of instructions by the political leadership to develop the Egyptian airports and to put it at the forefront of the comprehensive development plan. Sphinx International Airport is one of the new airports aims to promote the movement tourism in a unique location because of the proximity near to the archaeological areas and that providing facilitation to traveller’s in order to avoid town congestion and to reduce pressure from the heart of Cairo. Since identity concept is a core factor in the designing process, underpinning to that, in Istanbul town, Istanbul Airport, Turkey, (Brownrigg, 2016), used a contemporary version of the Ottoman vault to recognize an inherent identity and quality of Constantinople, whilst Medina town, at Kingdom of Saudi Arabia, the design shape of palm became the key motif for the structural expression and as tented structures reference to the Bedouin history of the region.

Contemporary style encompasses a range of styles influenced by culturally diverse and technologically advancing world as a dynamic combination of materials, methods, concepts and is part of a cultural dialogue that concerns with cultural identity.

Our proposed design influenced by “Art Deco” as one of the trends of modern art movement. Art Deco is a style of architecture and design that repeated geometric motifs using sumptuous materials represented luxury, glamour, exuberance, and faith in social and technological progress. With respect to ancient history and art colliding with a mass marketed contemporary aesthetic, so the Egyptian revival was influenced by the Art-Deco design trends of the 1920’s and 30’s that is unprecedented.

That situation called for the necessity of paying attention to introducing the civilizational identity of that place. Therefore, in our research, we will use the inheritance terminology of the ancient Egyptian civilization and its incorporation into the design process to consolidate the aesthetic values of ancient civilization in the minds of visitors.

1.1 Project Location

Sphinx International Airport as shown figs 1 & 1.1, is at 45 km of Cairo-Alexandria desert road and by 12 km from the Grand Museum and the pyramids area by total area of 25500 square meters consists of two floors on an area of 4500 square meters. First floor is

for travel and reception halls and the second one is for auxiliary administrative services.

It includes 42 diverse service buildings, 4 buildings for power stations and a meteorological building next to a mosque and garage with the latest thermal cameras in the world



Figure: 1 - Main Facade of Airport Entrance



Figure: 1.1 - Main Entrance



Figure: 2 -Checking-in Arrival Procedures

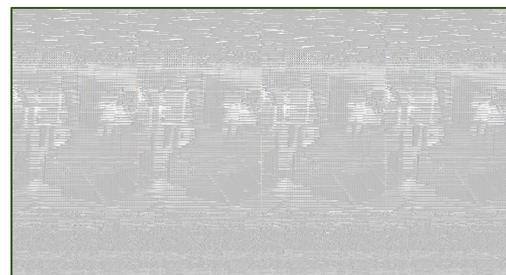


Figure:2.2 -Main Public Arrival Hall

The main terminal building as shown in figures: 2 & 2.2 consists of two travel halls by a capacity of 150 passengers /hour each, VIP exclusive service hall,

customs duties, passport areas, administrative and tourist offices, security, a cafeteria and a tax free market. Along with stations locations such as fire unit, sewage treatment station, Egypt Air Company maintenance station. In the time mean, the Egyptian Ministry of Aviation's expansion future plan aims to increase the airport capacity by establishing a new building to accommodate for 900 passengers/hour comparing to the current capacity of 300 passengers/hour to achieve a yearly target estimate of total 1.2 million passengers.

2. Research Problems

The Egyptian state has moved towards establishing a number of new international airports in variety of governances outside the capital, aiming to increase number of the visitors and reducing the pressure and intensity on the main 'Cairo International Airport'.

So underpinning with the national development plans, Egypt established number of newest airports such as (*Sphinx International Airport*), (*The New Administrative Capital Airport*), (*Marsa Allem Airport*) and currently two airports of (*Ras-Sidr Airport*) and (*Bardawel Airport*) that are still under construction or are in redeveloping stages. Our Research problems detailed in the following axes:

2.1 Axis :Far Distance from Applying the Identity and Harmony with the Archaeological Environment

Conformity and design repetition of 'Sphinx International Airport' with the design of 'The Administrative Capital Airport (at Katameya)' in the external facades and most of elements of the interior architecture.

As well as, we have noted the absence of an expression or a design that expresses the importance of this ancient historical place, which also need to be distinguished from a design aesthetic point of view of the promotional role to provide adding value as well as increasing the revitalization of the Egyptian civilized tourism.

2.2 Axis :Incompliance with the International Design Standards for VIP Exclusive Service Halls

Current interior design of the Hall is limited in size and not commensurate with the future trend aiming to increase the airport up to 900 passengers /hour. Furthermore, it is not in line with the international standards that followed when designing these halls such as the necessity of deploying elements of technological means of communication. Finally, yet

importantly, the element of furniture should properly have integrated with the design aspect to achieve the target requirements.

We have noted not applying the appropriate models of identity in designing of the Hall and its elements that some European models were used in the furniture that were not fit with nature of the surrounding place.

3. Research Aims

a) Merging the concept of heritage with contemporary in creating a historical identity by employing the vocabulary of the ancient heritage in the elements of interior architecture as cultural message stressing the identity of Egyptian civilization to the visitors and creating an environment that paves for what they visit via implementing a unique creative design.

b) The worthwhile trend that innovating a distinctive design of the interior furnishing elements for VIP exclusive service hall by using hi-tech communication technological means accompanying with modern systems and it praise role in linking the present with civilized heritage

c) Enhance increscent of functional, economic and the cultural efficiency of the distinguished service hall by adding additional area to achieve positive value for airport and its visitors.

4. Design Philosophy of Creative Vision

The philosophy of creative vision is deriving from integrating the values and features of ancient Egyptian heritage with contemporary technologies in designing of VIP exclusive service hall as it is front reception area and the first visual area that record into visitors' minds and their impression to achieve the goal from its re-employing to fit the identity of the place. As thus, that design is adding a new proposal to the national project of developing the pyramids area that coinciding with the proximity for coming of opening of the Grand Museum by 2021.

Design concept carries a message that expresses the greatness of the Egyptian state in its civilization through the philosophy of using the cartouche icon that referring to the king's names and royal titles and their ancient civilization in expressing the Egyptian state in the concept of using following words of (*Egypt – the Peace – the Security*).

4.1 Design Idea

The philosophical concept of the designing idea combines heritage and contemporary design in a way that expresses the facade of the pharaonic temples bearing three pyramids represented in form of three giant golden cartouches symbolizing in a virtual form the royal titles of three pyramids (*Khufu, Khafre and Menkaure*) from the heritage of ancient Egyptian civilization. That in reality, they designed to express three contemporary pyramids (*Egypt – the Peace – Security*) in the current era of the modern Egyptian state.

The idea of designing the main facade of VIP exclusive hall derives from the name of the airport Sphinx that is the first receiver of the flood-god 'Habi' that consider as the first welcoming area for arrivals to Egypt. The entrance interface is inspiring by the shape of the royal-cap of the head in the sculptural formation of the head of the Sphinx with its cross lines as a design feature that appeared in the main entrance and the wall surrounding the reception door as well as in the internal walls.

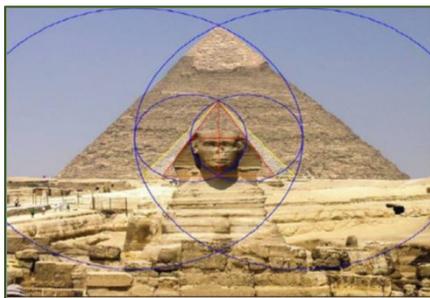


Figure: 3- Golden Ratio of Sphinx's Face to Pyramid in a Geometrically Proportionate

The vast pyramid interface and the entrance on vertical axis of the height of the pyramid as in the concept of (*Golden Pyramid*) shown in fig-3 appear as shape sphinx-face attributed to the Great Pyramid in a geometric manner proportional to its architectural ribs and its usage in designing vertical level processors for the interior walls.

The idea emphasized the use of the foundations of interior design based on the concept of symbolism, symmetry, balance and abstraction in the expression of formation in line, shape, composition, texture and color.

As an informative language conveys a message to the visitors using ancient heritage vocabulary such as the

hieroglyphic line in a contemporary environment integrated with technological technologies as a key factor to raise level of the cultural knowledge for visitors and their interactions with the Egyptian identity.

4.2 Emblem Idea

Idea of the design derived from using "*The Golden Cartouche*" that is the official emblem of hieroglyphic seals that was carrying the royal titles in the ancient Egyptian state. The design of cartouche as shown in fig-4, is diffuses as main emblem of the airport and as an addition distinguishes it from other airports. We have innovated the idea taken from these three gold cartouches designed in the project as embedded to refer and express the concept of the phrase of (*Egypt - the Peace - Security*).



Figure: 4 – (Egypt, Peace , Security) Expressed by Golden Cartouche

(*KEMET*) is the first name for Egypt in the ancient Egyptian language is according to the land of black clay, that is, the land of fertility and the good of the Great Nile. Words of "peace" and "security" expressed in the old language as (*HOTEP*). It carries a hieroglyphic sign of identity and a civilized feature that emphasizing concept of security and the safety for everyone coming to the land of KENANA - Egypt. These words in the design are consider as a passing key for each visitor coming to Egypt. "Egypt Security and Peace" translated by using the heritage vocabulary into the elements of interior architecture design represented in mass, proportions, materials, color, interior furniture accompanying with contemporary techniques, expressed by pharaonic symbols underpinning values and culture of the ancient state such as protection, safety, justice, balance and wisdom, as indication of the strength and greatness of the Egyptian state.

5. Methodology

- Strategic approach to the design process relied on conducting number of analytical studies through characterization, analysis and documentation with progressive steps that begins with collecting the necessary data such as site location, studies on the vocabulary of ancient heritage whether were for artistic or architectural for temples and some Pharaonic symbols and their meanings inspired by ancient decorations. As well as, inspiration taken from the collectibles of some furniture selected from the treasures of Tutankhamun from furniture and jewelry in the design process.

- Documenting the status of VIP exclusive service hall with photographs illustrated and conducting personal meetings with site-workers, preparing analytical studies on spatial spaces and its surrounding areas of rendered services through engineering lift-space for vertical and horizontal levels of the hall.

- Indication and measurement of some international design standards for this type of exclusive service hall to measure the degree of conformity such as those specified by JPA Design (Duncan, 2019), which is a pioneer company in the field of airport design based on identity having its branches at London, Singapore and Dubai. Then, we identified some specializing international design companies that will detailed later on.

- The study also touched on the identification of a number of technological technologies used in modern communication systems and hi-tech materials and their suitability with the functional requirements of the place with the possibility of integrating them with elements of interior architecture while preserving civilizational features at the same time.

5.1 Current Status of VIP Exclusive Service Hall

There are two entrances, one from the main road as shown in fig-5, and the other is located in the back view overlooking the airstrip as shown by fig-5.1, where the main entrance and travelling Halls of the passengers were mediated by vastly panoramic glass facade in a light blue-sky color revealing the largest possible area of the external corridors to the visitors.



Figure: 5 - Front Entrance of VIP Hall



Figure: 5.1-Back Entrance of VIP Hall

Figs: 5.2 & 5.3, illustrated elements of interior design of the hall designed in a modern contemporary style such as walls, ceilings, floors, lighting, and interior furnishing units dominated by the European character in most of its components away from the Egyptian identity as shown hereunder when it was experimental opened on January 25, 2018:



Figure:5.2- Area Allocated for VIP Visitors Reception

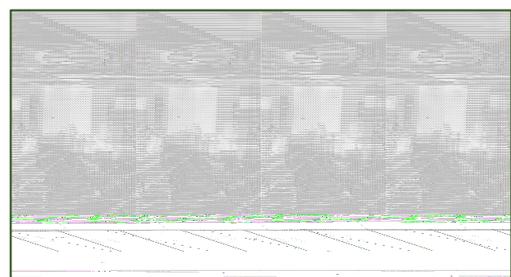


Figure: 5.3- Front Layout of the Hall

When the VIP hall was renovated in 2019, element of interior furniture was completely changed into English rustic style that was less in quality compared to the previous style used before the renovation process as illustrated in figs: 5.4 & 5.5:



Figure: 5.4- Renewed Hall in English Rustic Style



Figure: 5.5- Modified Main Entrance From Access Port

5.2 Indification of Current Design Problems

a) The sitting area allocated in the exclusive service hall limited to 173 square meters, which is below the accepted sitting limits for small Halls in international airports which measured with a minimum of 300 square meters. We have noted that the total spatial measurement of the hall allocated for passengers reached approximately 235 square meters without attached security office, administration offices and annexes of toilettes. It divided into an inside area of 173 square meters VIP hall, movement corridors of approx. of 33.3 square meters, external and internal entrances of 28.8 shown fig-6.1:

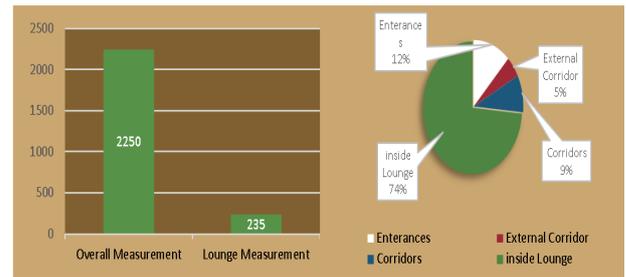


Figure: 6 – Hall Measurement to the Grand Total

Figure: 6.1 – Hall Total Current Measurement

Where the area of the exclusive service hall represents only about 10% of the total area of the first floor, fig-6. Taken into consideration that the appropriate space needed by the passenger in those halls should not be less than 3.8 square meters per passenger to feel comfortable, spacious and achieve appropriate compatibility with global averages that is determined according to the available capacity.

b) Reception area for the presidential personalities and delegations was not separately distinguished in the current-status from the rest of the hall; thus as certain reception protocols will not have performed properly accordingly.

c) Lack of highlighting and introduced the Egyptian identity in the current design which is does not correspond to or reflects the nature of the place and its surrounding environment and getting benefit from the advantage of its proximity to the archaeological areas.

d) Lack of existence of certain necessary internal auxiliary services such as business center, dining, and self-serving areas.

e) Lack of interest in the integrated furnishing with hi-tech technological services, as well as absent of availability of high-resolution screens, not providing a build-in touch unit that interface remotely with set of operating keys to control lighting as well as the other various audio-visual means.

f) Lack of interest in introducing appropriate lighting elements and not finding alternative solutions that allows taking advantage of the natural lighting and integration with industrial lighting.

g) Lack of attention to the sounds treatment for the hall walls as necessity implementation of proper soundproof panels and to use of an integrated high-performance audio system for more comfort for visitors.

h) The current design for the hall used traditional materials in elements of the interior architecture that were noted in the walls, ceilings, floors, lighting, and the vocabulary of furniture and interior furnishings that we noted that doesn't not suit the place nature or purpose that it created for it.

6. Analytical Detailed Studies

6.1 Historical and a Contemporary Overview

Exclusive Service Hall Concept and the Most Famous Ones

The first hall was in 1939 known as "The Flagship Club" at LaGuardia Airport - Admiral Airlines. The worthwhile concept of exclusive service Halls that it offering variety of premium services and amenities such as more comfortable seats, information screens, television and wireless charging station, as well as a business center equipped with internet, photocopiers and fax services, sometimes it may include an open bar, spa, massages, fitness centers and amenities cabins. Then after more than 80 years of progress and the development many international halls were distinguish globally as premium and unique ones of which we choose the first top three out of ten Halls were ranked internationally that are VIP Hall at Air France Airlines, Lufthansa Airlines Hall for distinguished service and Swiss Air Executive Hall. In regards of identification of the most famous interior architecture designers, we have noted the following companies:

➤ VIP Hall at Air France Airlines designed by Noé Duchaufour - Lawrence.

➤ Distinguished Hall of Singapore Airlines designed by ONG & ONG Ltd.

➤ Executive Hall at Cathy Pacific Airlines designed by Perspective Ltd.

6.2 International Design Standards of Exclusive Service Halls

We noted and reviewed the following five referential standards sources that setting group of basic standards for designing this type of halls, which are including one Egyptian source that is Egyptian Civil Aviation Authority (ECAA) and four international ones are Air Transport Association (ATA); International Civil Transport Organization (ICAO); International Air Transport Association (IATA) and Federal Aviation Administration (FAA). We have taken into consideration the criteria stipulated by the Egyptian Civil Aviation Authority (ECAA) in its

issuance no (6) in the sub-section (K) issued in July 2019 that regularizing the use, determining the quality of material sources, parts and equipment used in design to ensure proper compatibility with Egyptian standards as a prime goal.

Our review over some other rules established by the Egyptian Civil Aviation Authority revealed that, most of it related only to technical aspects and requirements of the aviation matters and did not include any certain design rules to be follow when designing elements of interior architecture for airport halls. The following standards are the core basics for designing Halls that having the identity concept as follows:

a) Standard of Architecture Environment Identity Compliance

Structural design that expresses identity and the environment is an important factor to achieve the greatest degree of integration between the interior architecture and identity that expresses the place and its cultural heritage or its archaeological features and, thus as one of the successful foundations for a good design of such type of Halls (Leonard, 2003),

b) Energy Balance Standard between Natural and Non-natural Lighting

Light is an important element within the architectural expression as one of the important technical considerations. Design of modern airport

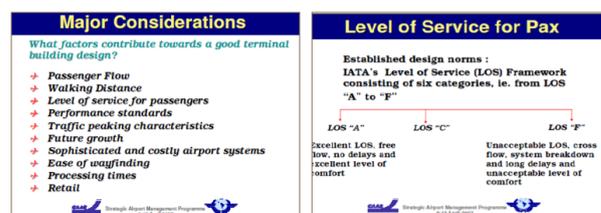


Figure 7 - Consideration Stated by LACAC & CAAS

Figure 7.1 - Grades of Varsity Levels of LOS

buildings based on as solar structures to conserve energy is a new trend worldwide that require the designers to make accurate calculations regarding relationship between the area of windows and the level of lighting required.

So, designers should take into their consideration the lost heat across overall fabric of the building and working to find the appropriate balance that helps in the performance of air-conditioning function for the place (Norman, 1991).

c) Standard of Modern Hi-Tech Communication Systems, (Shengwei, 2010)

The communication network was developed by high-quality information network to ensure the physical interconnection between the various systems and achieve their technical and cognitive integration including voice services for the telephone and voicemail, the service of remote calls and internal television systems, and the service of local and global networks for e-mail and the high-speed internet.

d) Integration Standard for Elements of the Interior Design (Blow, 1996)

The Interior design vocabulary including the basic elements of its contents, seating areas, the

the basic norms rules made and published by International Air Transport Association (IATA), Latin American Civil Commission (LACAC) and Civil Aviation Authority of Singapore (CAAS) 2007 as shown in figs: 7&7.1:

These considerations as fig-7.1 include ease passenger flow, short walking distance, and level of service LOS, standards of operating performance at peak times, and the possibility of future growth amongst with the availability of advanced systems. These categorized levels as indicated by the planning guide in fig-7.1, as top rank of LOS (A) that characterized by:

- ✓ Easy movement and proximity to travel and

Item of Compliance Measurement	VIP Exclusive Service Hall
<p>a. Standard of Architecture Environment Identity Compliance</p> <ul style="list-style-type: none"> - <i>To how extend confirm the compliance with place and environment</i> - <i>Hall capacity to total airport capacity per an hour</i> - <i>Condition and ease of passenger's free flow</i> - <i>Capability for future extension</i> 	Incompatible
<p>b. Energy Balance Standard between Natural and Non-natural Lighting</p> <ul style="list-style-type: none"> - <i>Providing proper balance in using lighting</i> 	Incompatible
<p>c. Standard of Modern Hi-Tech Communication Systems</p> <ul style="list-style-type: none"> - <i>Providing communication systems and indicative signs</i> 	Incompatible
<p>d. Integration Standard for Elements of the Interior Design</p> <ul style="list-style-type: none"> - <i>Providing highest level of service per PAX</i> - <i>Excellent level of comfort</i> - <i>Considering the approach of Common-Use Self Services (CUSS)</i> 	Incompatible

Figure: 8- Schedule of Compliance furnishing elements that are compatible with other elements of ceilings, walls, and floors in a consistent form with the general design to show its aesthetic and creative value.

Other International Sources

Which called for the necessity of looking at and to familiar with other international sources that clarify some of the foundations in designing types and models of these Halls. For example, we illustrated

arrival halls condition of free flow.

- ✓ Take into account the time inside the halls and not allow delay.
- ✓ Provide the highest level of comfort and luxury.

6.3 Schedule of Compliance Measuring with the International Standards

Hereunder table as shown in fig-8, shows the extent of whether achieving compatibility was done, or in the other side there is lack of relation to the

application of the foundations and standards in the current design of the exclusive service hall with the international standards for designing the distinct halls:

7. Proposed Principles for Elements of Interior Architecture Design

7.1 Architectural Character of the External Facade of VIP Exclusive Service Hall

Based on above basic fundamental standards and international common rules in design, our proposed design stems from the inspiration, culture, art, architecture, colors, and the landscape patterns that are an essential part of the environment.

Where the design focused on the concept of merging and mixing the arts of ancient Egyptian civilization in its forms and signs and the elements of interior architecture to reflect the ancient identity and to be that identity is the basis upon which the foundations of the interior architecture of the VIP entrance and its interior elements that built for.

Thus, all functional spaces taken into consideration through materials and colors changes such as the use of soft floors compatible with nature and identity of the place. As well as, walls, ceilings, and the exploitation of the distinctive architectural form of hieroglyphs and shapes, through preparing an open design that carries the identity of the Egyptian civilization.

We have used local raw materials and taking into account climatic determinants and influencing humidity factors, so raw materials were chosen that were compatible with these considerations, such as marble, wood, copper, nickel, gilded, gold leaf in simulation and inspiration from the internationally recognized treasures of Tutankhamen.

7.2 Interior Standards for Architecture Elements

We have used elements of interior architecture in re-developing the hall in a distinct way creates a contemporary environment that is compatible with the Egyptian architecture in a comfortable manner to provide a high-quality service that only exists in Egypt. So effective planning must allocate additional space for future expansion, thus we added new spaces in a harmonious form between the architecture and interior design consistent with the

interior finishes and artworks that used signs and symbols to express the old identity.

8. Historical Documentation Studies

The Singularities of the Ancient and Symbolic Egyptian Heritage

In our proposed design for the exclusive service hall, we will present selective signs elements of the hieroglyphs heritage shown in the following table by indicating its photo and its explanatory meaning.

A number of the vocabulary of ancient Egyptian art was selected from Stephane Rossini (Rossini, 1989), as illustrated in fig-9, were used to redesign the hall in stereoscopic designs that appeared in the elements of interior architecture (*i.e. walls –ceilings –floors*) and the following are their vocabulary, meanings, and most famous places to be found in: (fig-9)

9. Technological Communication Studies

Combining Modern Methods and Systems with the Elements of Interior Furnishing

The design used the contemporary trend in modern and hi-tech materials for the elements of interior furnishing included LED lighting, Nano-coating wood, velvet fabric, satin fabric and semitransparent fabric for curtains. Effective design of the amenities for the seats inside the distinctive service halls as figs 10 – 10.1, it is preferable to use wooden seats lined with high quality or leather materials that characterized by not changing their colors with ease of maintenance and not being subjected to scratching. Where technological means of communication incorporated into the elements of interior architecture such as walls, as in the furnishing of seats to provide maximum possible comfort for visitors.

Symbol Meaning	Documentation of Place	Vocabulary of Cultural Heritage	Ancient Icons
Symbol of the winged golden disk is associated with kings, strength, flight of spirit and theology	There are important monuments and temples in all of the highest heights in ancient Thebes and royal tombs		"Winged Sun of Thebes" or "Horus of Behedti" 
Symbol of protection from evil spirits in life and after death	Cartouche of King Thutmose III - Kamak Temple as well as in the tomb of Tutankhamun		Ancient Egyptian Cartouche 
Symbol of Upper Egypt Atum-Ra, the sun god and a symbol of purity, enlightenment and resurrection	Two types, white and blue as a symbol of the unification of the Egyptian kingdoms found in the ancient royal temples and tombs		Lotus Symbol 
Symbol of the god Ra, symbolizing justice, wisdom, and the mark of an ostrich feather is the hieroglyphic symbol	Found on the walls and roofs of temples, such as the Karnak Temple, as well as in royal temples in general		Feather of MA`AT 
Used for decorating & they are believed to inhabit the underworld & they go down every night to accompany the sun	Tomb of Amenhotep		Seba 

Figure: 9 - The Vocabularies of Ancient Egyptian



Figure: 10 – Hi-Tech Comfort Chair



Figure: 10.1 – Required Three Requirements

These means include Wi-Fi internet networks, wall or hanging screens, to display information that shows takeoff and landing times, and clarify portal data to the aircraft, as well as include wireless charging stations and television screens. In addition to some other electrical equipment integrated into the distinctive seats that enable easy electronic performance as well as lighting and touch power control units providing three main features: speed of performance, comfort and luxury, fig-10.1.

10. Proposed Stages of the Design Process

10.1 Project General Planning to Redevelop the Exclusive Service Hall - VIP

Design re-planning and interior architecture coordination of current internal Hall that its area is totaling 235 square meters as fig-11, via using the deletion or addition approach used to the surrounding spaces and re-employing them in a manner compatible with the international requirements design concepts for that type of Halls in the international airports.

Thus, new proposed design increased the overall capacity of the Hall to accommodate for 55 people/hour that is currently is providing services for only 20 people/hour. Hereunder layouts illustrated the current hall design as shown in fig-11, and then

the new design layout after added renovations – fig-



11.1:

Figure: 11 - Layout of Current Design of the Hall Totaling 235 square meters

Figure: 11.1 - Layout of the New Renovated Design totaling 353.5 square meters

Based on additional areas added to the current design, as fig-11.1, variety new activities were added such as allocating a specific area for receiving official delegations, cafeteria, business center, as well as designing the surrounding area of the hall to include



administrative, secretarial offices, security, a kitchen, a general control room for computer and internet systems, Wi-Fi, lighting, etc.

11.2 External Facades Designs

In our proposed design, we used the approach of redesigning process of the hall exterior facades and its main entrance to be expressed its identity that was inspired by integrating the shape of pyramid along with Ras Abu Al-Hall (*Sphinx*) these exterior facades is the first pioneer area that receiving for the coming or traveling visitors to the airport. The following figure 12, illustrate the current main façade of Sphinx Airport before redevelop and redesign the main gate of the airport. While figure 12.1 is for the new proposed design after modification to cope with the Egyptian identity as planned.



Figure: 12- General Daylight View of Current Hall Main Façade (as built)



Figure: 12.1- New Proposed Design for the Main Façade of the Airport

That done through increasing the spatial of facade spaces with glass surfaces that helps to provide good natural lighting and to give additional advantage to the travelers to enjoy the external visibility of the airstrip during their waiting period in the hall as shown in figs 12 & 12.1.

11.3 Elements of Interior Architecture Design

11.3.1 Horizontal Levels (Ceilings - Floors)

11.3.1.1 Ceilings:

The visual approach of ceilings design in the exclusive service hall as fig-13 is inspired by the ancient Egyptian ceilings in the pharaonic temples that were in form of a sun in full set of stars in the middle of it colored by golden color, copper red with and blue color expressing the blue sky.

Thus as, the visitors will pay their attentions to see it and express interests to such unique design of the ceiling.



Figure: 13 – Hall Ceiling Plan

11.3.1.2 Flooring:

As about floors of the hall in fig-14, the treated carpets used to absorb the sound and give a kind of luxury to the place.

That element combined with the marble material with designs that mimic the ceiling as if it were mirrors for the ceiling with changing colors as in the wood material of DHF used in the auxiliary services rooms for the distinguished service hall such as control rooms, business center and a number of administrative rooms

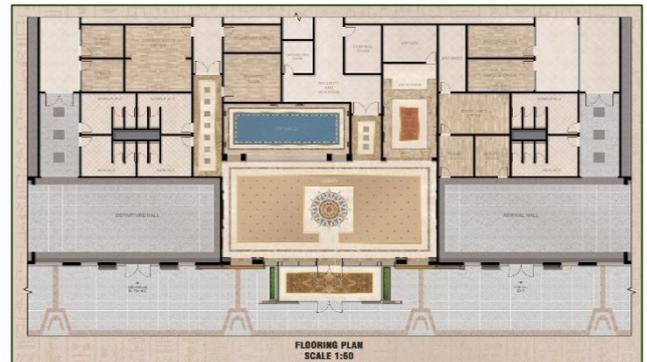


Figure: 14 – Hall Flooring Plan

11.3.2 Vertical Levels (Walls - Interior Doors - Doors)

The concept of anchored levels includes all of walls, partitions, entrances and doors which were designed by a philosophical concept combines between heritage and contemporary. That achieved through expressing facades of the pharaonic temples bearing the three pyramids represented in image of three giant golden cartouches (Golden Brass) of which previously were expressing the royal titles as shown in figs-15 to 15.1.

We have used this idea, form and concept in our project to symbolize the current three contemporary pyramids of Egypt by replacing it into three words of (*Egypt –the Peace –the Security*) in the current



modern era of the Egyptian State that were translated into three different languages.

Figure:15 Official Exclusive Service Hall Sector Figure:15.1 Side Wall Corner

For raw materials, we have used natural mahogany wood for the facade of redeveloped and innovated exclusive service hall including columns, structural shoulders and marble material also used and embedded in the new design.

The hieroglyphic signs used in the design of electronic movement curtains (*VIP hall roller blinds*) with the glass facades.



Figure: 15.2 - The Strip to the Front Facing the Entrance from the Airstrip



Figure: 15.3 - Sector Referring to Official Hall, Main Door, and the Cafeteria

11.3.3 Interior Furnishing Items (*Furniture and Furnishings*)

The element of furnishing is one of the most important elements in the internal architecture of spatial spaces through various pieces of furniture such as seats, tables, sofas and counter for reception or food purposes. The concept of design idea of furnishing the hall has been based on employing the heritage values of ancient Egyptian civilization from signs hieroglyphs and symbols of forms that indicate meanings that considered add value to the cultural information of that civilization with introduction of technology tools or methods into the designing process that expressing the state in our time.

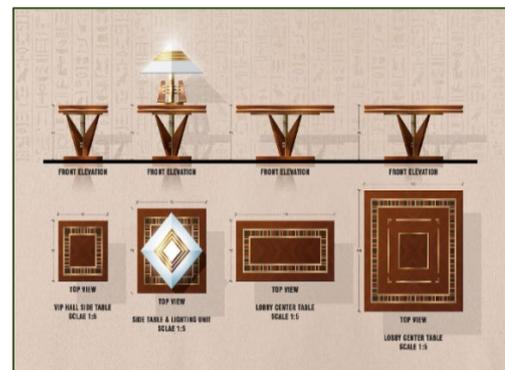


Figure:16 - Table, LED Lighting (Front & Top)



Figure: 16.1 - Lotus Symbol in the Design

Hence, as fig:16.1 the various tables and its sizes of mahogany wood, inlaid with Marquette Works, are Nano-coating wood and designed from colored wood veneer with pharaonic motifs, gilt copper and the design feature of its constructional structure is derived from the unique and beautifully shape of the famous lotus flower as illustrated in fig:16.1.

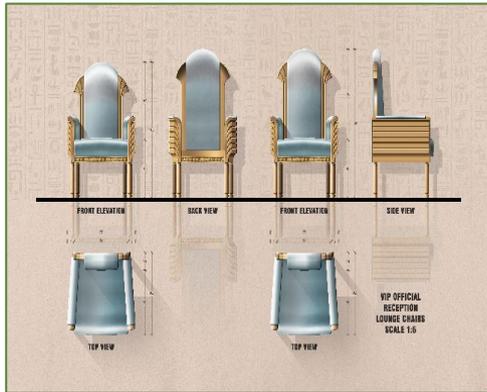


Figure: 17: Sectors of the Official Chair

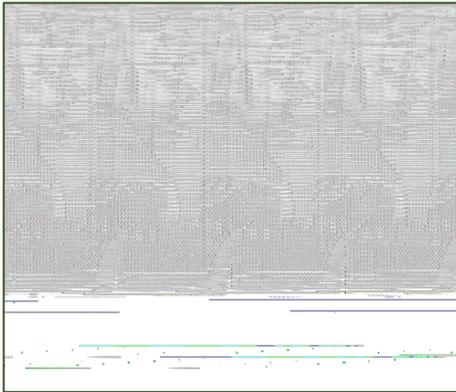


Figure: 17.1: Feather Sign used in Arm Chair

As for the chairs used in the main Hall fig: 17, a feather of MA`AT was used in the design of side armrests, and that feather symbolizes the fairness of the rule of the Egyptian state and its wisdom and strength. For color furnishings, a blue color was chosen, which is considered one of the most important pharaoh colors used in pharaonic motifs as indicated in fig: 17.1.

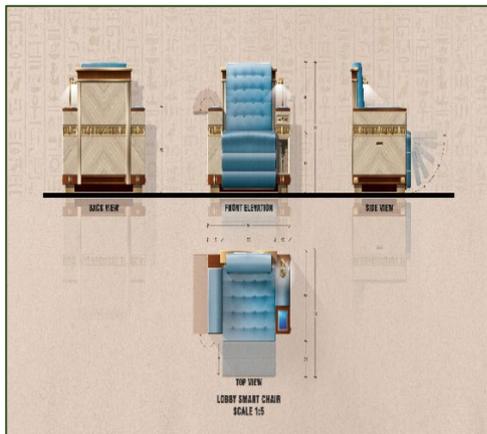


Figure: 18: Exclusive Service Hall Chairs



Figure: 18.1 – Hi-Tech Comfort Chair

For the distinguished service hall seats that were designed in form of versatile usage as fig: 18, in accordance with the international standards, taking into consideration the necessity of providing the utmost comfort and luxury for the comfort of visitors, which include the latest modern technological means of audio and visual means of high-quality displays, automatic control of sound, lighting, and moving chairs to positions comfortable for its visitors as fig: 18.1. The design presented in the project represents a characteristic pharaonic character through the use of engraved decorations with hieroglyphic signs coated with gold foil and the material used in the brushes is the leather. For the turquoise colors', we have used the blue color that considered as of one of important colors in the past.

11.3.4 The Lighting Component (Ceiling, Wall Lighting Units and Furnishing Elements)

The lighting element and its internal units are among the distinctive elements of the ancient Egyptian heritage, as the design presented in the project has varied by offering a number of different types, including general lighting and represented by a large 4.5 meters' diameter chandelier as fig: 19.2, that represents the lantern unit in a blue starry sky like the design of the roofs of ancient pharaonic temples.



Figure:19.1 –Ceiling & Side Table Lightings

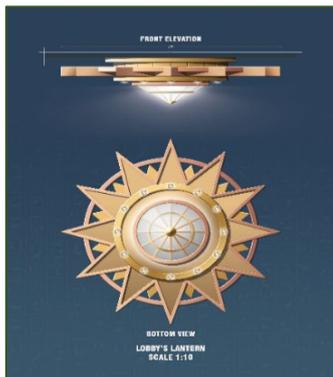


Figure:19.2- Lobby Lantern

Thus, as surrounds the ceiling large tiles bearing various hieroglyphic and pyramid signs with distinctive motifs of the ancient Egyptian heritage which were executed using copper ores and clear acrylic. As for the design of side table LED lighting unites as fig: 19.1, it was inspired by the shape of a triangular pyramidal shape.

11.3.5 Elements of Artistic Formation (Flower Pots)

One of elements of artistic formation used in our design is the bowl-shaped vases (18th and 20th Dynasties) as shown in fig: 20.1, Necropolis Thebes as illustrated in fig: we have seen that Egyptians excelled in the use to which they put terracotta.

Egyptian terracotta which has a 92% silica content, is so close grained and so singularly adapted to hold the finest relief and the most delicate impression that it has long been given the name of "Egyptian porcelain".



Figure: 20 - VIP Hall Flower Pots

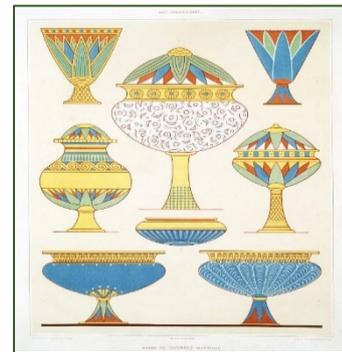


Figure: 20.1 - Egyptian Bowl Vases (Necropolis Thebes)

So, we have inspired by that concept and the meaning to design our flower pots in the same manner and form as illustrated in fig: 20. The name "Ciborium" or a crater form is normally given to vase which narrows at the base in the category of "Ciboria"¹ known as Egyptian bean (Taschen, 2014). There are some grounds for thinking that it is because of this imitation that the Egyptian vases have a base which is barely able to support the body.

Results Discussion

The importance of Sphinx International Airport is undeniable in terms of its location, close connection with the archaeological area and being the main destination for receiving the upcoming ceremonial delegations to inaugurate the Grand Museum. Therefore, great attention must have paid to designing an exclusive service hall to suit this major international event and to continue achieving its other purposes towards strengthening the trend of increasing Egyptian tourism and reducing pressure on Cairo International Airport.

We have found that the exclusive service hall does not fit with its purpose that it was establish for, and does not express the Egyptian identity that indicates history and culture of the ancient Egyptian civilization of more than 7000 years ago. Furthermore, we have found it interiors furniture are noticeable overlap between number of different European styles that are inconsistent with the nature of the place. As well as, no compatibility with variety foundations and standards that applied globally when designing the elements of furnishing these

1 Taschen, B. (2014). (EGYPTIAN ART), Emile Prisse d' Avemes, China, ISBN: 978-3-8365-1647-1.

exclusive halls. Another finding is noted, that is the lack of sufficient space for possible coming future expansions and not taking into account the set considerations and requirements to provide a superior level of distinguished service that should contain prime main services, amenities and luxury required for such distinctive halls.

Finally, yet importantly, inadequacy and poor internal coordination of the space due to the lack of available enough waiting seats that are not commensurate with the absorptive capacity of the airport in terms of number of trips expected to receive delegations for this vast event that is an addition for the revitalization of Egyptian tourism in the coming period. Based on the foregoing and above discussions, this matter called for the need to redesign the hall in a contemporary heritage image by merging the Egyptian identity using ancient Egyptian signs and symbols among with the elements of interior architecture design. Therefore, we added new spaces to the hall to accommodate achieving the desired goals and present a unique model in designing to distinguish that airport from the rest of the Egyptian airports.

Conclusion

The researcher presented innovative designs with a contemporary formative vision to re-employ the distinguished service hall by merging the concept of heritage with contemporary in creating a historical identity by employing the vocabulary of the ancient heritage in the elements of interior architecture as cultural message stressing the identity of Egyptian civilization.

The study gathered and expressed the ancient Egyptian heritage with elements of interior architecture and furnishing elements as key elements to show the Egyptian identity in the name of a contemporary trend that established ancient cultural values accompany with the trend that innovating a distinctive design of the interior furnishing by using hi-tech communication technological means accompanying with modern systems and it praise role in linking the present with civilized heritage. Therefore, proper attention was given to the proposed design for the exclusive service hall that revealed and achieved a unique design approach to express our praise Egyptian identity's that is distinguished from rest of the

Egyptian airports and place it among the best international Halls designed based on identity and its surrounding environment, compatible with the international foundations and standards which are followed in designing these distinctive halls.

The new design succeeded adding new spaces that enhanced increscent of functional, economic and the cultural efficiency of the distinguished service Hall and gave a distinct level of comfort as well as the luxury required for the visitors and provided a great addition to the Egyptian airports that help in achieving the national goal of enhance the increase of the promotional activities and to furtherance the implementation of 2030 plan that keeps the continuous and the effective growth of the tourist movement in Egypt.

Alphabetical Abbreviations

ATA: Air Transport Association

CAAS: Civil Aviation Authority of Singapore

ECAA: Egyptian Civil Aviation Authority

FAA: Federal Aviation Administration

IATA: International Air Transport Association

ICAO: International Civil Transport Organization

LACA: Latin American Civil Commission

Alphabetical References for Information Sources

A. Books

1. Blow, C. (1996), (*Airport Terminals*), Butterworth Architecture, Structure and Envelope Systems.
2. Egyptian Civil Aviation Authority, (2019), (*Approval of Materials, Parts, Processes, and Appliances Applicability, ECAR Part 21*), Issue 6, Rev. 2.
3. Leonard, B. (2003). (*Integrated Building: The Systems Basis of Architecture*), John Wiley and Sons, USA
4. Norman, A. (1991), (*Airport Engineering*), John Wiley and Sons, USA
5. Rossini, S. (1989), (*Egyptian Hieroglyphics: How to Read and Write Them*, Dover Publication, Section VI.
6. Shengwei, W. (2010). (*Intelligent Building and Building Automation*), Spon Press, London
7. Taschen, B. (2014). (*EGYPTIAN ART*), Emile Prisse d' Avemes, China, ISBN: 978-3-8365-1647-1.

B. Websites

7. Brownrigg, S. (2016), (*Cultural Influence on Airport Design*), (on line), Available at: <https://www.scottbrownrigg.com/design-research->

unit/articles-publications/research-cultural-influence-on-airport-design/_(Accessed: 10-11-2020)
8. Ceramics and Pottery Arts and Resources, (2015), (*Egyptian Art Deco enchantment*, Venice Clay Artists, Available at: <https://www.veniceclayartists.com/exotic-egyptian-art-deco/>_(Accessed: 15-11-2020)
9. Duncan, A. (2019). (*JPA Design*), Hall Buddy, Available at: <https://www.Hallbuddy.com/blog/airport-Hall-design-with-jpa-design>,, (Accessed 25-11-2020)

Abstract

The concept of heritage and contemporary design in interior architecture at airports, indicates a philosophical difference in all architectural and technological aspects. Thus as, from the airports taken as a whole, we will focus on a unique part, that is the VIP reception halls which provides distinct services for users. Our selection of new opened Sphinx airport came from its unique location near the pyramids archaeological area and close to the Grand Egyptian Museum.

The problem of current design of that hall is stressing the question of where is the contemporary Egyptian identity as a prime impression to be received by the arrivals? The answer was there is no direct or indirect slight sign or referral to assertive identity of the place. So, we will emphasize the merging of the ancient heritage with modernity to achieve a contemporary Egyptian identity through symbolism in expression to convey an indirect cultural message that expresses greatness of the Egyptian civilization. The strategic approach will rely on conducting analytical studies for elements of the ancient Egyptian art as well as discussing current status of the VIP hall to prepare appropriate analytical studies.

The paper at end, will intend to present innovative designs with a contemporary vision for re-employing the VIP hall by focusing on the merging between ancient heritage and contemporary to achieve a contemporary identity through re-employ interior architecture and its related furnishing elements that leading to a new design that serving the contemporary trend that established ancient cultural values in visitors' minds.

Keywords: Heritage and contemporary; Identity; Hieroglyphic symbols; Hi-tech methods & communications