

OH SMART AIRPORT - CLAIM

The purpose of the 'OH SMART AIRPORT' invention is to provide the new Airport with the strongest structure and circle airport building that has greatest area compare to other shapes with eliminated airplanes traffic while landing or takeoff. OH Smart Airport with ATC tower in the middle with strong support plus the Spherical Radar System and the rotate-able Drum Camera System provide the airport with great view and air traffic control better than any other airports. The Smart Airport in circle shape provides closest pickup and drop-off ramps with no or less traffic lights or stop signs with shortest walking distance for the travelers. The visitors and travelers can able to explore and view entire airport, and the travelers do not have to go through the security screening gates again after check-in and get into the lounge for boarding. The Smart Airport in circle shape is also invented with airplane rescuer that running around in circle to catch airplanes stuck landing wheels. OH Smart Airport is also invented with the Airport Emergency Exit paths with high custom security protection for both travelers and visitors for entire airport. This claim shows the overview figure of this invention which was submitted on 2024/08/23 with U.S. PCT/US24/43532 and International PCT/IB2024/000451 Patent Numbers, which can be used as the representing invention drawing to print on the patent frame and the following functions and features of this invention.

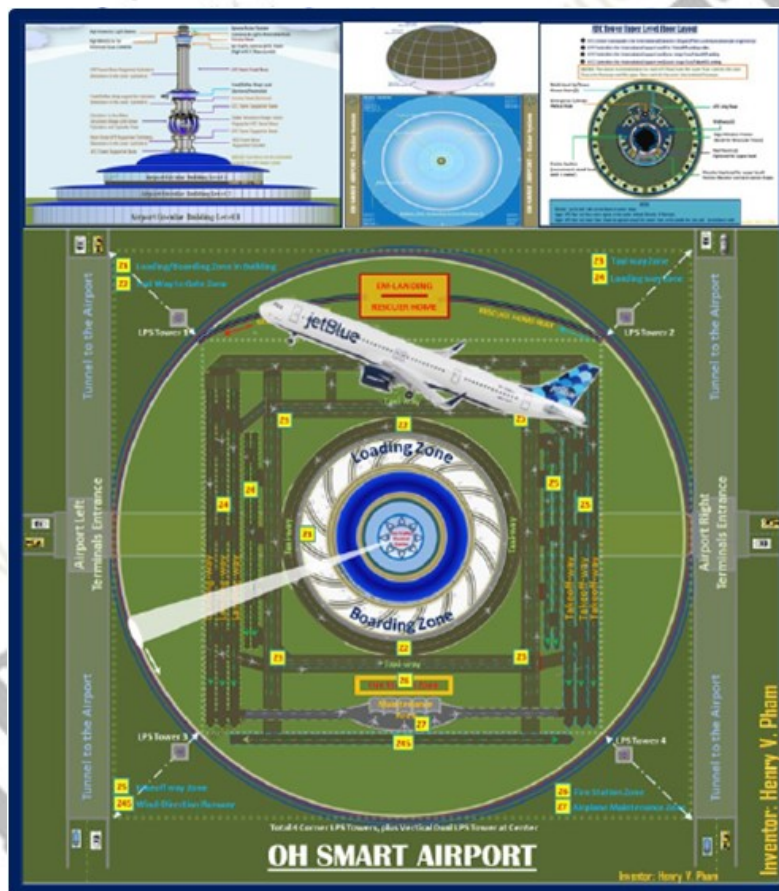


Figure-A: OH SMART AIRPORT -- Overview

1. The main apparatus for the OH Smart Airport, comprising:

The Airport in circle shape with airport building in circle in the middle with airplanes gateways boarding around and runways on both sides plus Airplane Rescuer provides great air traffic control with

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the tower in the middle and closest pickup and drop-off ramps for fast drop-off and quick pickup with no or less traffic lights or stop signs for the travelers and visitors. Wherein, the Air Traffic Control (ATC) tower would come with Globe Symbol as the supporter base with optional Rotatable Food/Coffee shop to attract travelers and visitors and the Spherical Radar system on top with plus of LPS devices that support the air traffic control better; the visitors and travelers can able to explore and view entire airport, and the travelers do not have to go through the security screening gates again after check-in and get into the lounge area for boarding; OH Smart Airport would come with Airplane Rescuer option that running in circle track to rescue airplane stuck landing wheels and provide great secured doors and paths for both travelers and visitors in Emergency Case; OH Smart Airport also provides Smart Gear Belt Cart Exchanger system for the travelers.

2. The main operational apparatus for OH Smart Airport, comprising:

OH Smart Airport with buildings and airport functional areas in circle would provide great view and easier for ATC personnel, great security doors and paths for Airport Security/Custom teams and shortest distance and convenience for arrival and departure travelers and visitors. Wherein, OH Smart Airport would provide great and easy air traffic control in one-way circle for the ATC team to monitor and operate the airport for both Domestic and International airlines on both sides of runways for takeoff and landing; OH Smart Airport provides one-way circle to eliminate traffic for Ground Transportation for fast drop-off and quick pickup at any location around the Airport Building with 4-Entrances in 90° directions; OH Smart Airport also provides 2 building levels for parking plus exploring views around the airport building for both visitors and travelers, and the check-in travelers can explore the airport around inside the building without having to re-screening again which is great feature to attract travelers that no other airport can have.

3. The Airport Foundation Layout apparatus for OH Smart Airport, comprising:

OH Smart Airport foundation layout would come with runways on both sides (left and right) of the airport circle building which is built with ATC tower in the middle, Airplane Rescuer Home on top and Firefighter Station and Airport Maintenance on the bottom of the layout. Wherein, the airport building with multiple building levels would be in the middle with ATC tower at center for strong base; the underground tunnels would be built on both sides of the airport entrances to provide airport building access which is required to have the clear ground for one-way circle for airplane traffic plus the airplane rescuer running in circle track rescuing airplane; the runways on both sides would be built in symmetry with longer runways for International Airlines on outer sides and in shorter runways for Domestic Airlines and the runways would use the new Quadletter Compass to show direction of the runways as recommended in the original invention document; the taxiways would be built to allow the airplanes from the circle gates or gateways with one-way circle to access to the runways for takeoff and get to the gates for landing; the apron for airplane ramping loading and unloading would be built around the airport building on the ground level which is used for luggage and airport ground services; and the airport power generator can be built and installed at this level.

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4. The Airport Buildings Level Layout for OH Smart Airport, comprising:

OH Smart Airport would come with 2 Underground Building Levels, Ground Level and 3 Building Levels. Wherein, the Underground Building Level-1 would provide airport building access; the Underground Building Level-2 would provide Ground Transportation Services; the Ground Level would provide airplane ramp for loading and unloading plus airport ground services; Airport Building Level-1 would provide check-in counters and traveler departure lounge areas; Airport Building Level-2 and Airport Building Level-3 would provide parking spaces and airport viewing alternately for both travelers and visitors.

5. The ATC building tower apparatus of claim 4, further comprising:

The ATC building tower would be built in the middle of the building with the Global symbol as the base supporter plus elevators and emergency stairs. Wherein, the Global symbol structure would be used as the supporter base and for decoration with country letters code as recommended; the ATC tower can be built with a rotate-able Food/Coffee shop which can rotate 10° per minute for seat-and-view entire airport during snack or drink time to attract the travelers and visitors; the ATC room would be built higher with rotate-able cameras and lights system in a drum and the Spherical Radar system on top of the ATC tower. The ATC tower can be built with stackable cylinder ring blocks or can be built with traditional method which is strong enough to support the tower with rotatable cameras and lights drum and the radar system on top.

6. The ATC tower rooms layout apparatus of claim 4 & 5, further comprising:

The ATC tower rooms would be in 2 levels to allow the ATC team to control Domestic and International Airline separately. Wherein, the top level would be used to control International Airlines, and the lower level would be used to control Domestic Airline; both level would have 4 sections, and would divided as ATC Center Commanders, ATC Controllers for Takeoff/Landing sides, ATC Controllers for pre-stage Taxi/Takeoff/Landing and ATC Controllers for post-stage Taxi/Takeoff/Landing as recommended to control the airport for both takeoff and landing on normal condition, and for emergency when Airplane Rescuer is operating to rescue airplane.

7. The Spherical Radar system apparatus for OH Smart Airport, comprising:

The Spherical Radar system would come in at least half of sphere shape with multiple level dishes without rotating around like the traditional radar system. Wherein, the radar system can come with both active and passive modes which are installed on each dish; the dish shape can be square, rectangle or trapezoid and the beacon shape would go with the dish shape; all the dishes on each level with predefined directions and viewing angles, would be connected together into the computer signal processing system to analyze for the target on which dish to find the position of the target in the air at any given time; the top radar dish would be used to scan the vertical view which would also be great for military use. The LPS devices installing vertically on the pole plus 4 round the corners would be useful for Airport Radar System which were introduced in the 'LPS – Local Positioning System' invention which was submitted on 2021/11/23 with U.S. PCT/US21/72562 and International PCT/IB2021/000949 Patent Numbers.

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8. The Airport Rotatable Cameras & Lights system apparatus of claim 1, 2 & 5, further comprising:

The Rotatable Cameras & Lights system would come with high power light and far focus cameras in the rotatable drum. Wherein, the drum would be built with rotational mechanical to rotate the drum around the top tower and follow the Airplane Rescuer; the lights would come with high power to beam far at least 3.5 km distance; the cameras would come with high power and far focus to record videos when the rescuer is operating; the cameras could come with wireless connection which can connect to the Camera Hostspot which was introduced in the 'Wall Security Camera System' invention which was submitted on 2024/01/31 with U.S. PCT/US24/13663 and International PCT/IB2024/000096 Patent Numbers.

9. The Underground Building Level-2 for Airport Building Entrance apparatus of claim 4, further comprising:

The Airport Underground Level 2 is the lowest level which provides the entrances to access into the airport building. Wherein, this level which would be built in ring path to provide airport underground access from left and right airport entrances for travelers and visitors, and would be built with ATC access elevator and Airport Custom access paths which would come with the security gates for security purposes.

10. The Underground Building Level-1 for Airport Transportation apparatus of claim 4, further comprising:

The Airport Underground Level 1 is used for Ground Transportation services and Arrival with 4 entrances in 90° degrees angles difference. Wherein, this level would provide arrival path with luggage and security checkout; this level would be divided into 2 main sections, one for International Airlines shown on top and one for Domestic Airlines; this level would also provide additional parking space for airport personnel, custom team and airlines staffs.

11. The Ground Building Level for Airport Apron, Traveler Arrival & Ground Services apparatus of claim 4, further comprising:

The Ground Level would be built for airport apron for loading and unloading, travelers arrival and airport ground services plus emergency exit paths. Wherein, the Ground Level would be divided into 2 sections for Domestic and International airlines, and the emergency exit paths would be separated where the International checked-in travelers cannot access into Domestic section for security purposes; the Airport Gateways or Gates for travelers boarding on the ramp would be built in arc shape with one Gateway can handle 3 big airplanes or more for International Airport; OH Smart Airport would come with 16 Gateways by default dimension which can be extended to handle more loading airplanes with the same airport building dimensions.

12. The Airport Building Level-1 for Departure and Travelers Check-in Services apparatus of claim 4, further comprising:

The Airport Building Level 1 would be built for travelers check-in and departure. Wherein, this level would come with ring driveways and inner circle area around the ATC tower with elevators which would be use for drop-off or pickup; this level would come with Departure Lounge, Airline Ticket Counters, and TSA security screening areas; the level would also come with elevators, stairs and luggage carts rooms to

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Henry V. Pham

provide carts for the travelers; this departure level would provide food & beverage and gift shops areas with elevators, escalators and stairs to access into upper levels for airport viewing.

13. The Airport Building Level-2 for Airport Viewing and Parking Services apparatus of claim 4, further comprising:

The Airport Building Level 2 would be built for travelers and visitors airport viewing and parking spaces. Wherein, the inner section of this level would be used for parking spaces, and the outer section would be used for airport viewing rooms.

14. The Airport Building Level-3 for Airport Viewing and Parking Services apparatus of claim 4, further comprising:

The Airport Building Level 3 would be built similar with the level 2 for travelers and visitors airport viewing and parking spaces. Wherein, the inner section of this level would be used for parking spaces, and the outer section would be used for airport viewing rooms.

15. The Airport Visitors and Travelers explore views apparatus of claim 13 & 14, further comprising:

The Airport Visitors and Travelers exploring views would be used the inner section of the Airport Building Level 2 and 3. Wherein, the inner section of these levels would be divided into 16 viewing rooms for 16 Gateways or Terminals and used for travelers and visitors alternately exchange the levels through the secured and isolated elevators to explore the airport around the building without contacting space between checked-in travelers and the outside visitors.

16. The Airport Parking layout apparatus of claim 13 & 14, further comprising:

The Airport Parking would be layout in Underground Level-2 for airport custom and security parking, the Transportation Underground Level 1 for airline staffs and Building Level 2 and 3 for visitors and travelers. Wherein, the parking spaces layout would be in 45° degrees layout with alternate parking access driveways with the standard parking space dimension.

17. The Airport Emergency Exit paths layout apparatus of claim 1, 2, 5 & 11, further comprising:

The Airport Emergency Exit paths would be built with emergency stairs for emergency access from Building Level 3 down to the Airport Ground Level and the safe and secured areas on both sides of the airport. The circle building provides the best evacuate the crowd to the safe areas outside of the circle building in shortest walking distance compare to other existing airports. Wherein, the airport personnel from the ATC tower control room and the people on the Coffee Sight Viewer above the Building Levels would use the Emergency Cylinder Helical stairs on the tower; the Emergency Stairs from the Ground Transportation Level 1 where the visitors in the waiting area would be used to get up to the Ground Level through the enclosed wall paths to both sides of the Airport for visitors evacuation to the safe areas; the checked-in travelers on Building Level 1 would be evacuate to their closest Airlines emergency exit doors; there are 4 Airport Security Doors with 2 for Domestic and 2 for International sections leading to 2 safe evacuate areas on both sides of the airport with separated Domestic and International visitors evacuate areas.

18. The Airport Emergency Cylinder Helical Stairs and main Security Doors functional apparatus of claim 17, further comprising:

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The Emergency Cylinder Helical Stairs would be built inside the tower, and the main Security Doors would be built on the exit paths leading to the safe evacuate areas. Wherein, one Helical Stair would be used for airport custom and security personnel; the other 2 Helical Stairs on both sides of the tower would be used for guests for visitors from the Coffee Sight Viewer; the main Airport Security Doors to protect the safe evacuate areas from unauthorized access would be built with 1 key lock and 2 deadbolts handles for inside and outside to make agreement on both sides to open the doors even the door is unlocked by airport security personnel.

19. The Airport Travelers Smart Cart Gear Belt Exchanger functional apparatus of claim 1 & 4, further comprising:

OH Smart Airport would provide Smart Cart Gear Belt Exchanger system to exchange cart from one level to another safer. Wherein, the cart system would use belt with gear on the belt which can hold and carry the carts along the cart exchanging paths; the cart would be built with gearbart on both sides to put on the gear belt with connection hook to connect carts in a batch; the cart exchanger system would have sensors to detect first and last cart.

20. The Airport Rescuer functional apparatus of claim 1 & 3, further comprising:

OH Smart Airport in circle shape would come with an option to rescue airplane stuck landing wheels with the Airplane Rescuer running around in the circle railroad to rescue when reaching the speed of the airplane. Wherein, the radius of the railroad would be 3.75 km or higher, and the rescuer would start at Rescuer Home at 12 O'clock and running out to the circle railroad at 10:30 O'clock then come back at 1:30 O'clock; the Rescuer would come with Drive Head vehicle, Sensor Positioning vehicle, Front Catching Connected vehicle, the Main Catching Connected vehicle with the wings holding base and follow with the Back Connected vehicle; the main Catching Connected vehicle would come with the rubber drive-able wheels on both sides to speed-up and keep balance for the rescuer.

21. The Street Traffic Control and Roads layout apparatus for OH Smart Airport, comprising:

OH Smart Airport would be built on the flat area to have major streets around the airport to handle traffic from all directions better. Wherein, the airport would come with 2 main entrances leading to the main street on either sides to provide the visitors enter or exit from or to any directions which would need major streets on both sides; the airport traffic security check points on both sides of the main streets entrances can be built as an option to block and check the suspects running from the airport.

Inventor name: Henry Viet Pham

Email Address: HenryVPham@Gmail.com

Business Website: www.TheCloudOSCenter.com

Phone Number: 714-686-0927