

SIMULATE, ANALYZE, OPTIMIZE AND VISUALIZE IN 2D AND 3D

NEW



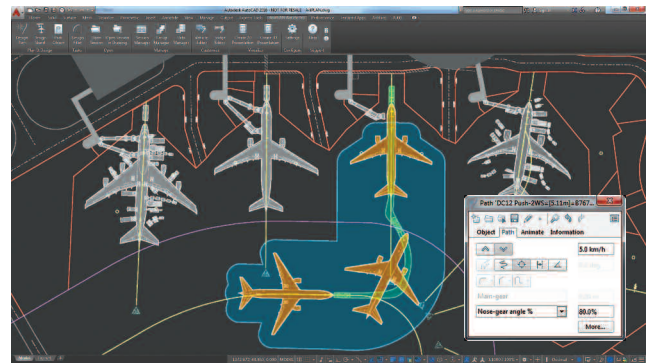
With renowned market-leading technology at its core, AviPLAN™ delivers a unique feature-set tailored to meet the specific challenges faced by today's airside planning, design and operations professionals. Analyze aircraft and support vehicle movements on airport aprons and taxiways, plan complex docking scenarios with multiple passenger boarding bridge - lead-in line - airplane combinations, assess jet blast impacts and safety clearances, simulate complex pushback maneuvers and more.

» EXTENSIVE OBJECT LIBRARY

Accurate airside planning is only possible with accurate equipment specifications. AviPLAN's extensive 2D and 3D object library, which includes more than 500 passenger, cargo, military and special purpose airplanes, has been developed in close collaboration with major manufacturers and objects are put through thorough quality-control checks to ensure the utmost accuracy, both visually and technically. Monthly library updates provide a steady stream of newly-released models.

» SAFE AIRCRAFT MANEUVERING

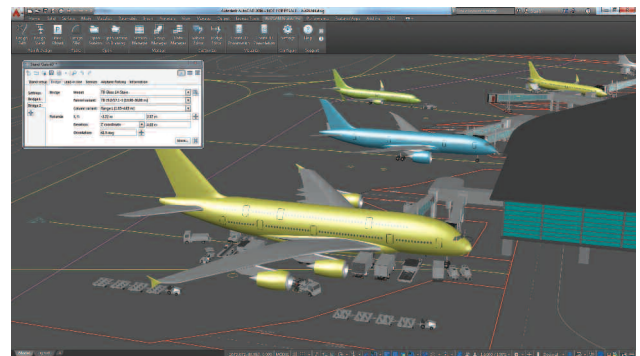
AviPLAN'S powerful 2D and 3D maneuver simulation tools allow users to define and adjust parameters such as aircraft/vehicle type, turn types and angles, construction points and offsets, speeds and much more "on the fly". Analyze jet blast impacts, assess taxiway fillets or control clearance compliance, either by following existing nose-gear or cockpit ground markings (CAD line and arc elements) or by generating new marking designs.



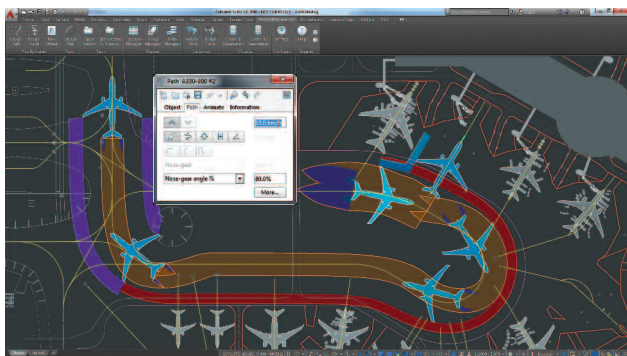
» Accurately simulate airplane pushback and pull maneuvers with a wide range of towbar or towbarless tractors

» INTELLIGENT STAND PLANNING

AviPLAN provides airport planning professionals with the tools required to plan and optimize 2D and 3D aircraft parking stands in an unrivalled level of detail. Factor in parameters such as apron slope and grade, passenger boarding bridge model, fixed apron services and airplane misparking margins. Leverage built-in software capabilities to optimize aircraft parking positions, minimize bridge slope or tunnel extension or even the number of stop bars required. Regardless of the nature of the task, the software will guide users through the design process, ensuring that no key aspect is overlooked.



» Leverage advanced optimization functionality to plan contact and non-contact stands in an unrivalled level of detail



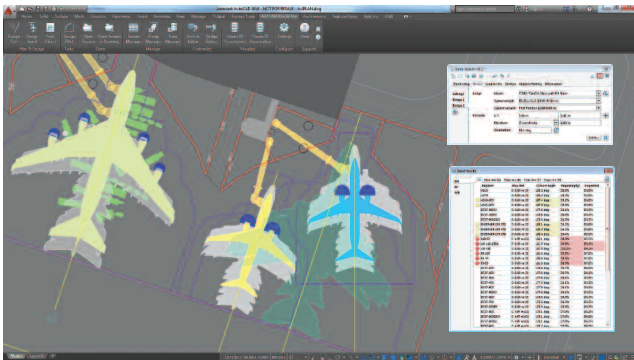
» Perform jet blast studies to ensure ground personnel and equipment are safe from high wind speeds aft of moving airplanes

» ACCURATE PUSHBACK MANEUVERS

AviPLAN's dependable path simulation algorithm allows users to accurately simulate complex airplane-towbar/towbarless tractor pushback maneuvers in 2D and 3D, for defining new or verifying existing operational procedures. Ensure that minimum safety clearances are respected and that no undue strain is placed on equipment when executing maneuvers on the tarmac.

»» COMPLEX DOCKING SCENARIOS

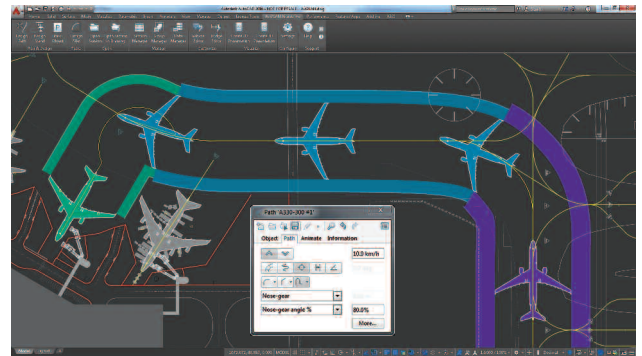
»» Planning Multiple Aircraft Ramp System (MARS) stands can present significant challenges, not least of which relate to the positioning of parked/pre-positioned passenger boarding bridges and the numerous vehicles and equipment required to service the aircraft. AviPLAN assists with this complex task by allowing users to simulate 2D and 3D docking scenarios that offer increased flexibility for servicing aircraft of different classes, along multiple lead-in lines, with multiple bridges.



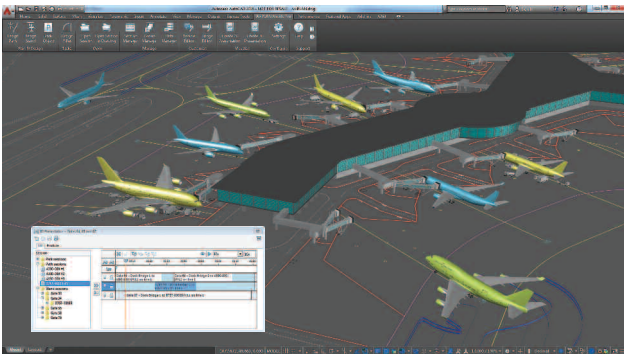
»» Plan intricate MARS stands, with multiple lead-in lines and passenger boarding bridges, with the guidance of warnings which indicate when design parameters are nearing, or exceed, limits

»» AIRSIDE DESIGN STANDARDS

»» AviPLAN incorporates International Civil Aviation Organization (ICAO), Federal Aviation Administration FAA (Aircraft Design Groups (ADG) and Taxiway Design Groups (TDG)) and European Aviation Safety Agency (EASA) aircraft groups and associated minimum safety clearance distances to provide operators with the essential tools required to efficiently complete airside studies. Clearances can be overridden for circumstances that dictate a deviation from industry guidelines.



»» Undertake clearance studies using taxi way, taxi lane and apron safety clearance guidelines from ICAO, FAA (ADG and TDG) and EASA



»» Create dynamic movie presentations to communicate technical output to stakeholders in style

»» PROPERTIES & DATA MANAGEMENT

»» All AviPLAN design commands include access to a property management dialog for handling elements such as aircraft service points, clearance envelopes, swept paths and jet blast profiles as well as properties such as layers, colors, fills, line weights and types. Data that is generated by AviPLAN, be it simulations, custom vehicles/passenger boarding bridges or property templates, can also be shared via one convenient data management command.

»» REPORTING & VISUALIZATION

»» Fully integrated within AviPLAN comes a tool-set for converting technical aircraft maneuver and docking simulation analyses into professional movies in 2D and 3D. Ideal for visualizing complex technical results, illustrating capacity issues or simply adding credit to a stakeholder pitch, this output will speak for itself. Further, AviPLAN also includes tools to produce detailed Microsoft Word® and Excel® reports with text and graphic details or to add text data tables directly into CAD drawings.



» AIRCRAFT, PASSENGER BOARDING BRIDGE AND GROUND SUPPORT VEHICLE LIBRARIES

- 500+ 2D commercial, cargo and military airplanes and helicopters from major manufacturers including Airbus, Boeing, Bombardier, Cessna, Lockheed Martin, Gulfstream, BAE, LearJet, Dassault, Antonov, McDonnell Douglas and more
- 1300+ 2D passenger boarding bridges variants from manufacturers including ThyssenKrupp (Spain and USA), CIMC-TianDa, Hyundai Rotem, Ameribridge (DEW), JBT AeroTech-Jetway, ADELTE (T.E.A.M) and more
- 275+ 2D ground support vehicles including towbar and towbarless pushback tractors, fire and rescue, catering, buses and more
- 150+ 3D realistic commercial, cargo and military airplanes
- 75+ 3D realistic passenger boarding bridges variants
- 40+ 3D realistic tractors (towbar and towbarless) and Ground Support Vehicles
- 2D design (critical) airplanes for each FAA, EASA and ICAO group
- Create custom ground support vehicles and passenger boarding bridges
- Create and share groups of aircraft, vehicles and passenger boarding bridges to represent a carrier's fleet or a project's critical design equipment
- Monthly library updates

» PATH CONSTRUCTION AND ANALYSIS

- Simulate 2D and 3D aircraft and vehicle maneuvers, both forwards and in reverse
- Perform pushback or tow maneuver with airplane and compatible tractor (towbar or towbarless)
- Follow nose-gear or cockpit ground markings (CAD line and arc elements) or;
- Maneuver manually or specify direction (value or inherited from CAD element)
- Alternate between arc, direct and oversteer turn types
- Vary speed and (nose-gear) steering angle, even when reversing
- Select from multiple construction points, e.g. airplane nose-gear or cockpit
- Review heads-up display of projected path and airplane or vehicle position
- Present jet blast velocity contours and impact areas for various engine thrust levels
- Show simulation paths e.g. nose-gear and main-gear, engines, wing tips, pilot's eye or vehicle envelope
- Activate ICAO/FAA/EASA/User-defined nose-gear, main-gear or wing tip clearances
- Display airplane service connections, support vehicle arrangements
- Show clearance boxes and engine-intake danger areas
- Design nose-gear or cockpit centerline markings

» STAND PLANNING

- Place static 2D or 3D airplanes, vehicles or helicopters (2D only)
- Define a 2D or 3D (on X, Y plane) remote stand, including lead-in line
- Define a 2D or 3D (on X, Y plane) contact stand (gate), including apron slope, (multiple) bridge(s) and lead-in line(s) (MARS stand)
- Specify layout characteristics, e.g. bridge envelope limits, cabin rotation and maximum slope
- Define apron service installations, e.g. fuel pits, 400 Hz and conditioned air
- Place stop lines manually, with/without airplane(s), using colored range indicator bars
- Drag airplane(s) along lead-in line and monitor bridge slope and other results
- Review heads-up display when (re)positioning bridges, lead-in or stop lines
- Automate stop line creation and airplane positioning, taking all specified parameters into consideration
- Automate the creation and/or minimization of stop lines
- Automate bridge slope or length minimization
- View detailed real-time numerical results, including warning indications when results are approaching limits
- Conflict analysis warnings reported if airplane(s) and/or bridge(s) are too close to one another
- Display airplane service connections, support vehicle arrangements
- Show safety clearance boxes and airplane engine-intake danger areas

» AIRSIDE DESIGN

- FAA, EASA or ICAO airplane classification and minimum clearance regulations
- Airplane filtering and sorting options, compare and/or select critical airplane(s)
- Fillet Design (Automated 'Design Task'): Define taxiway intersection routes/entries and create fillet, shoulder, critical engine lines for critical airplanes
- Clearance violation alert between stands, e.g. when (re)positioning a stand
- Continue planning in 2D and convert only critical studies to 3D

» DATA MANAGEMENT

- Set colors, line type, layer/level and other properties for display elements
- Create and store property templates, independent from drawing
- Export/Share custom airplanes, bridges and vehicles
- Store simulations with unique names and manage using folders
- Duplicate simulations within a drawing and place on desired location
- Copy simulations from the user database and place in a (new) drawing
- Store presentations with unique names and manage using folders
- Export/Share simulations for use in other drawing(s) and/or CAD platform(s)

» REPORTING

- Create Microsoft Word® (.odt) and/or CAD text path reports outlining object speed, path length, maximum nose-gear angle and more
- Create Microsoft Word® (.odt), Excel® (.csv) and/or CAD text stand reports outlining bridge model(s), rotunda location(s) and elevation(s), bridge slope(s), lift column height(s), airplane door sill heights and stop lines positions and more

» ANIMATION AND VISUALIZATION

- Animate 2D and 3D airplane, vehicle and helicopter (2D only) movements in CAD drawing
- Create 2D and 3D presentations with multiple simulations
- Sequence/Set start and stop times for each simulation session
- Follow a moving object or pan between fixed camera positions
- Display static objects and path elements before and after animation
- Set properties for simulation sessions in presentation, e.g. fill color, line types
- Select playback speed, frames per second and video codec type, and display elapsed time
- Record presentations to AVI for playback using any compatible movie player

» COMPATIBILITY

- Autodesk AutoCAD® 2010 - 2016 including verticals (except AutoCAD LT)
- Bentley MicroStation® V8i SS1 - SS3
- Bricsys BricsCAD® V14 - V15 (Pro and Platinum versions only)
- Full support for 32 and 64-bit operating systems
- System requirements:
Workstation: Windows® XP - 10 (32, 64-bit)
Network: Windows® Server 2003 - 2008 (32, 64-bit), 2008 R2 - 2012 R2 (64-bit)

For more information on AviPLAN
visit www.transsoftolutions.com



AviPLAN is available in four tailored versions, turn the page for further details

AVIPLAN

AVAILABLE IN FOUR TAILORED VERSIONS

- AVIPLAN TURN | **Aircraft maneuver** simulation essentials
- AVIPLAN TURN PRO | Advanced **aircraft maneuver** simulation and visualization
- AVIPLAN AIRSIDE | **Aircraft maneuver** and **parking stand simulation** essentials
- AVIPLAN AIRSIDE PRO | Advanced Aircraft maneuver and **parking stand simulation** and visualization



THE 'PLANE' BENEFITS OF AVIPLAN

SAFETY FIRST

Efficiently and confidently design airfield layouts, control minimum clearance considerations, between moving and/or stationary aircraft and ensure safe working conditions for personnel exposed to jet blast in areas aft of operating aircraft.

MOVE PRODUCTIVITY SKYWARDS

With AviPLAN's top to bottom functionality workflows, users are guided through the given design process, ensuring that no key aspect is overlooked and guesswork is avoided.

SUITABLE FOR ALL NEEDS

With four tailored versions catered to airports, consultants, authorities or equipment manufacturers small, medium or large, AviPLAN is ideal for budgets of all sizes.

DEVELOPED BY AIRPORT PLANNERS

The culmination of in-house airport planning knowledge plus feedback from experienced planners from all corners of the globe, AviPLAN is the only solution available on the market that is truly designed by airport planners, for airport planners.

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