AGi32 Advanced Class 2016 – Outline for Australia & New Zealand Classes

NOTES:

- This outline is for a 3-day class. This is an *approximate* indication of the order in which the topics will be covered.
- No roadway-specific topics are covered in the AGi32 Advanced Class.

DAY 1

I. Quick Commands and Keyboard Shortcuts

II. Importing CAD files – Exploring Options
- 3D: set surface properties
- 3D: coplanar merging
- 2D & 3D: curve increment
- After importing: Translate Origin
- Troubleshooting

III. Luminaires Part 1
- Instabase user account: why this is advisable
- Instabase searches
- Luminaire Insertion Point, Luminous Box and Luminaire Symbol: how to avoid problems

IV. Surface Types
- Explore all types except roadway
- Changing from one type to another:
  - o Potential effects on calculations

V. Surface Properties
- Removed
- Luminous: numerical value and color
- Daylight Exterior
- Color
  - o How AGi32 calculates reflectance from RGB values
  - o Color Bleed
  - o Effect on calculated results
- Direct Flux Only (as a surface property)
- Exploring and comparing appearance of opaque, transparent, translucent and luminous surfaces

VI. Textures
- Ways to apply Textures (tiled, stretch, etc.)
- How AGi32 calculates reflectance of Textures
- Custom Textures
- Preview Textures
- Displaying Textures (or not): differences in display uniformity

- Picture frame + Texture: hang it on a wall!

VII. Display Options in Render Mode
- Pseudo Color
- Gray Scale
- Exposure

VIII. Enhancing the Appearance of the Visualization
- Adding Library Objects
  - o Adjusting size, colors, textures
  - o Placement, orientation
  - o Effect on calculations
- Manual meshing
  - o How does it work?
  - o When can it be helpful?
- Adaptive Subdivision
  - o How does it work?
  - o When can it be helpful?
  - o Automatic in some daylighting

DAY 2

IX. Enhancing the Appearance of the Visualization, continued
- Secondary Sources
  - o What are they?
  - o When can they be helpful?
- Luminaire Subdivision
  - o When does it happen automatically?
  - o When to force it?

X. Ray Tracing
- What is it?
- How does it differ from Radiosity?
- Exploring the various Ray Trace options (Glossiness, Soft Shadows, Clouds, etc.)

XI. Luminaires Part 2
- Luminaire Collections
- Creating a custom luminaire symbol
  - o Making the new symbol a Smart Symbol
- Custom Luminaire Arrangements
- Luminaire Groups
- Luminaires with color filters
  - o How AGi32 calculates transmittance from RGB values
- Show CCT effects
  - o Caveats: cannot show color *rendering* with accuracy

XII. Project Manager
- Creating a project
- Transferring entities between projects
- Isolating and combining projects
- Accessing Surface Edit
- Modifying luminaires

- Freezing, locking, protection and passwords

XIII. Scene Manager
- Luminaire Labels
- Create Scenes & Channels
- Assign luminaires to Channels
- Scene Map & Scene Summary (Schedule)

DAY 3

XIV. Background Images from Google Earth
- Combining, scaling, fading, cropping
- Using in Model Mode

XV. Exterior Obtrusive Light: Analyzing Glare and Spill
- AS 4282-1997
  - o Setting up the calc grids
  - o Showing compliance

XVI. Dynamic Edit
- Modeling
- Editing

XVII. Calculation Meters
- Exitance Meter
- Virtual Meter
- Where problems can occur

XVIII. Statistical Areas
- Infinite column
- Define in elevation view
- Filtering by project

XIX. Mesopic Concepts and Calculations
- Background info/explanation (PowerPoint)
- Calculations in AGi32
  - o Photopic luminance and illuminance
  - o “Effective” luminance and illuminance
  - o Including in schedules

XX. Daylighting *(time permitting)*
- What you need to know about modeling daylighting with AGi32
  - o Daylight Transition Surfaces
  - o Daylight Exterior Surfaces
- Setting location and sun/sky conditions
  - o General sky conditions
  - o Using Weather Database
- Individual date/time analysis
- Climate Based Daylight Modeling (Annual Simulations)

XXI. Animations and Making a Movie *(time permitting)*
- Two consecutive segments: Fly-over and Walk-thru
- Adjusting Walk Speed, adding Pauses, etc.
- Start Frame and End Frame