Creating Unique Models Using Photorealistic Card Techniques

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models On30 & SM32 Queensland sugar cane and shire tramways

Card modelling evolution...

• Card use from the earliest modelling period, certainly during my 1950s teenage years
• Commercial and homemade brick paper, etc., “Punch Out” from books or single kit pack. Special inserts in modelling magazines
• Doll house type special event items, eg Christmas oriented structures
• Today: Models and textures on the web.

The clinic...

• Builds on over a decade of working with photorealistic card models to create Queensland’s unique structures/rolling stock.
• Photorealistic textures... using photography and computer manipulation.
• Techniques suitable for any modelling era and locale.
Card modelling evolution...

• Several sources in Queensland, 1990s-2000s

Reduced from Ron Aubrey’s O scale Queensland House kit; two large printed sheets (photocopy) from hand drawn and coloured/shaded originals.

Card modelling evolution...

• **Photorealistic texture**: an image used for applying a realistic surface texture on a 2D or 3D model.

• Normally created from a high definition photograph of a real world surface texture -- brick, concrete, rusty metal, timber, etc.

• [Sometimes a photo applied directly for assessing a model's viability.]
Photorealistic modelling

- Use of photographic images of surface textures to create a more realistic model.
- Textures may be specific to the local environs (e.g., recognisable doors, signs) or generic (CI sheathing, brick walls, etc.)
- Textures free online, commercial (including kit bashing), or developed by the modeller.
Sourcing local elements...

Qld Hotel... door with 3D layers

Qld Hotel... finished model

Qld Hotel... transom doors

- Drawn with photorealistic textures added
And their challenges...

Photographic Tips

- As many (high resolution) photos, from as many directions, as possible!
- Establish scene/locale/purpose and details
- Shoot straight-on for potential texture images
- Large objects need several overlapping images along the length at consistent distance/angle
- Avoid wide angle/telephoto for texture images (image distortion)

Computer Support

- Image manipulation requires software that allows multiple “layers” for development and adding “textures”.
- 2D (photo or drawing) or 3D software OK, they just have different strengths/features.
- Work on copies of images/files, not originals.
- Save often and make backup copies.
- Ensure good workspace, frequent breaks (RSI)

Yeppoon Pineapple Bins...

- Good side image, but end required multi-step squaring up, image still needs scaling for use
Yeppoon Pineapple Bins...

Pineapple Boxes, Yeppoon - O Scale (1:48)

1.5" vertical steel strips sides
1" x 2" timber vertical strips inside
1.5" pipe, ends flattened across top
2° angle welded frame corners/laths
1" x 0" timber sides/roof
10° wide galvanised plates ends
2" x 3" timber skids/beams under box

Field lines in blue.

Moreton Mill’s River Store
Field dimensions 2003
Brad Peaon.
Drawing not necessarily to scale; some dimensions were estimated when field dimensions did not agree.
Water tank ~1830 high and on concrete blocks.

Note that the building was likely constructed using imperial measure while field dimensions are metric.

Developing the Model/Kit

- Initial stages the same as for any model:
  - Research, including plans from publications, etc.
  - Site visit for dimensions and photos
  - Imagineered from a photo
- Create scale drawings, decide on construction materials and acquire materials
- Research, Design, Test Build, Evaluate and Redesign, Test Build, Package for distribution.
Modelling from historical research

- Buderim Shire carriages: photos/drawings only
Buderim Shire Tramway cont.

- Likely model should have BT lettering!
If all else fails...

• Clever Models textures (structures and some rolling stock, “critters”) and kits; order online.
• Sample below: 4” timber, window with multilayer trim and standing seam sheathing

If all else fails...

• Non-commercial online sources include textures.com (sample below: concrete block, wood shingles, galvanised metal) and free cutouts, such as “Build Your Own Historic Illinois Buildings”.

For the future...

• Commercial, kitbashed and scratchbuilt photorealistic models: backscene, low profile and full featured
• 2D/3D modelling: dedicated model railway software; entry level through professional design software
• Purpose? Cost (h/w & s/w)? 2D only, 3D for 2D output, 3D printing?
Free online photorealistic kits

- QR 32' timber camp wagon, QR cream shed, QR fettler's shed, QR small halt (station), and QR small communications shed.
- Queensland-style cottage, garden shed, brick toilet block, and timber picnic tables.
- Moreton Mill's River Store lunch room with dryer shed and sand dryer, Queensland-style Country Hotel, Saw Tooth Roof Industrial Building and 20' shipping container.
- Buderim Shire Tramway carriages: Coach and Guards' Van.

Kits/Photos/Research, etc.

- Narrow Gauge Downunder (NGDU) magazine for details on development, techniques, etc.

- Happy Modelling!