

Materials Sustainability Standards and IPR

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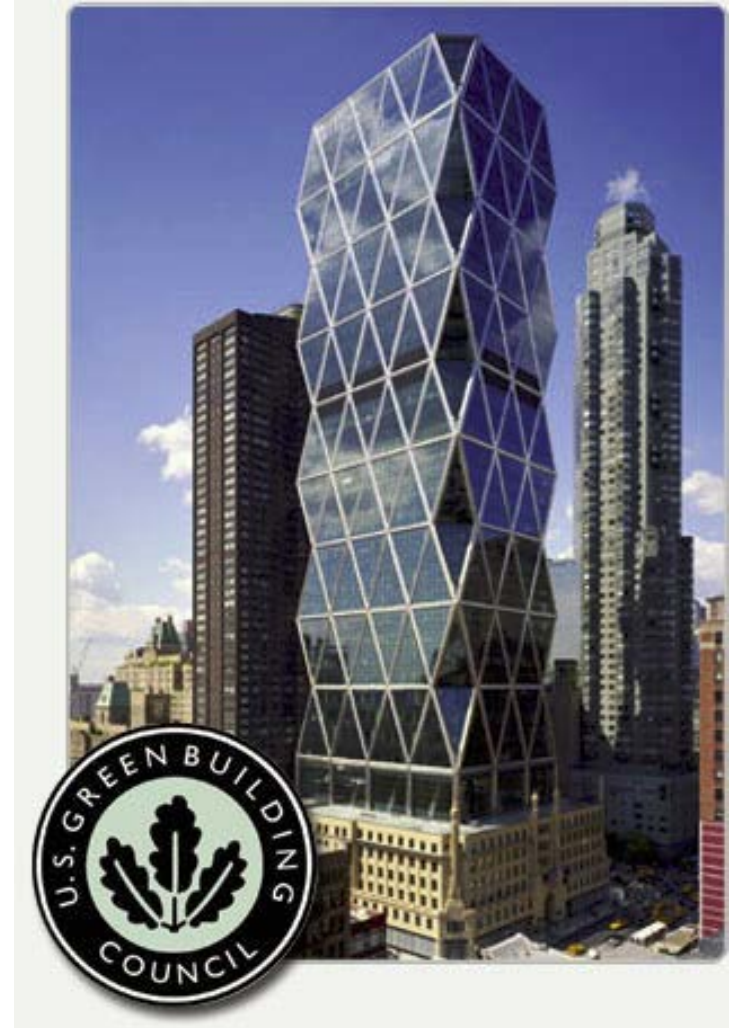
U.S. Building & Construction

- U.S. Commercial & Residential construction market
 - \$1 Trillion/year
 - 13% of GDP
- Buildings account for
 - 21% of energy consumption
 - 72% of electricity consumption
 - 40% of CO₂ emissions

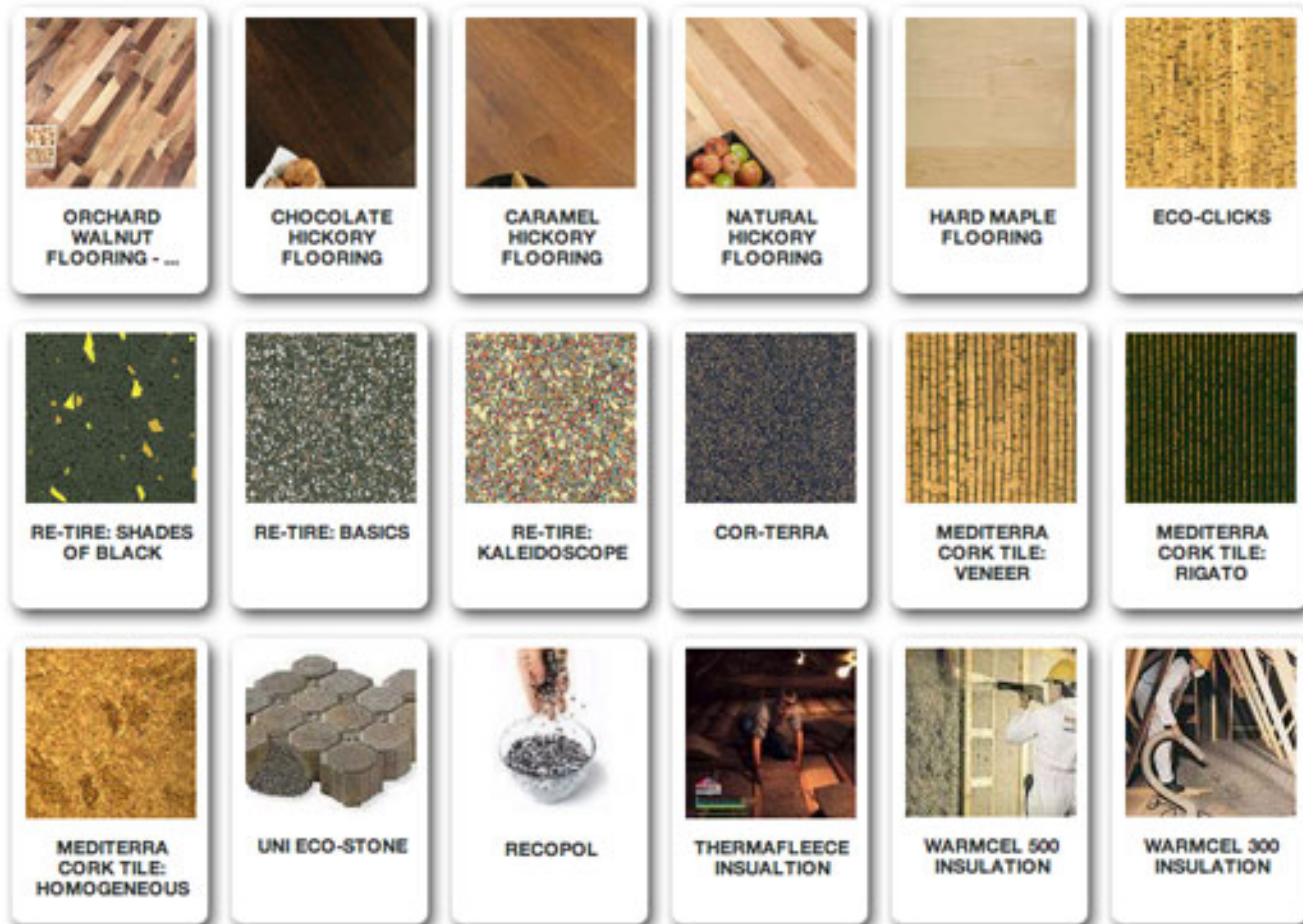


Sustainable Building

- USGBC's LEED Program
 - Certified 5,000 "green" buildings since 2000
- Intl. Green Construction Code (GCC)
- Federal/State procurement programs



Sustainable Building Materials



IPR and Material Sustainability Standards (MSS)

- Cradle-to-Cradle (C2c) (multi-sector)
- SMaRT (multi-sector)
- EC 2009/607 (hard surface coverings)
- GECA 50-2011 (carpet)
- BIFMA E3-2010 (furniture)
- Nordic Swan 031 (furniture)
- NSF-140 (carpet)
- NSF-336 (fabric)
- ULE ISR 100 (gypsum board)

Findings Overview

1. MSS Development Landscape
2. IPR and MSS

Who Develops MSS?

Who Participates?

- Private Sector
 - Manufacturers
 - Designers/Architects
 - Consultants
- Government
 - EPA/GSA/DOE
- *Not* Academia

Where?

- Governmental SDOs (EU/Australia)
- Traditional SDOs (ASTM, UL)
- Industry Groups
- Specialized SDOs
- Private Consultants

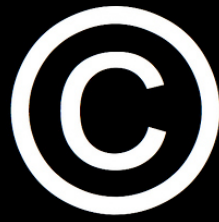
Certification

- 1st Party: manufacturer
- 2nd Party: SDO
- 3rd Party: independent lab
- Result: ECOLABELs



IPR and MSS

- Copyright
- Trademark/Certification Mark
- Trade Secret
- Patent



copyright

- Most standards bear copyright notice in SDO
 - Some U.S. standards registered

- Availability
 - EU/Aus and several U.S. available for free (access-only)
 - Some U.S. SDOs charge \$100-\$200 for access

- Conclusion: sale of standards not key to this industry
 - Manufacturers/purchasers focus on product sales
 - Consultants focus on consulting
 - Certifiers charge for services



Trademark

- Ecolabels for certified products
- U.S. has 'certification mark'
 - Most U.S. ecolabels registered as cert marks
 - SMaRT – not registered
- Non-U.S.
 - EU Ecolabel – special statutory protection
 - Nordic Swan – national protection (Sweden, Finland, Norway*)
 - Australian GECA – trademark
- Usage Fees
 - US cert marks – none
 - EU/Aus – fee schedule

Trade Secret

- Standard Details
- Product Details
- Product Scorecard
- Certification Procedures

**TOP
SECRET**



Patent

- Products and materials amenable to patent protection (compositions of matter, mechanical inventions, etc.)
- Patent policies
 - U.S. ANSI SDOs: basic ANSI policy
 - Others: none
- Possible Explanations
 - Patent value insufficient
 - Patent incentives not needed for innovation
 - Trade secret is preferable
 - Waiting for first-mover
 - Industry is vulnerable



Thank you!

- *Investigators:* Jorge Contreras (AU) and Chuck McManis (Wash U)
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