

Homes for All Ages

Presenter:

Linda Elliott-Smith, FASID

education-works, inc.



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NAHB Home
Technology Alliance

Why? When? How? What?


HOMES FOR ALL AGES... and All Abilities

"The longer you wait for the future, the shorter it will be."
Marleen Loesje

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Linda Elliott Smith, FASID

- President of education-works, inc.
11+ years continuing education development
- President – smith & associates, inc.
25+ years Interior Design
- Past National President of ASID
2004
- Past President of NCIDQ
1997, 1998, 1999
- Tennessee Architectural & Engineering Examiners Board
8 years



Learning Objectives:

To:

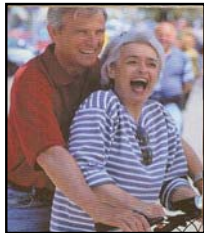
- Better understand demographics of aging clients
- Understand influence of design of homes on ability of client to age in place
- Understand needs of aging client as they relate to homes (flooring, lighting, and specific products)
- Realize the variety of products on market that will assist in this goal
- Gain additional ideas as to what to look for in products that will create homes designed to meet clients' future needs

POLL: Who's here:

- Architect/Building Designer/Landscape Architect
- Electronic Systems Professional
- Home Builder/Remodeler
- Interior Designer
- Other

The Universe Has Changed

- The vision has changed!*



AGE IS ONLY A NUMBER

- "Life is not measured by the number of breaths we take, but by the moments that take our breath away."

Anonymous

- "The longer I live, the more beautiful life becomes."

Frank Lloyd Wright (1867-1959)



HOW DO YOU DEFINE "OLD"?



95 72
58 45





THE LANGUAGE

Live, Work, & Play

UNIVERSAL DESIGN
ADAPTABLE DESIGN INCLUSIVE DESIGN
VISIT-ABILITY AGING IN PLACE
LIFESPAN DESIGN BARRIER-FREE DESIGN
DESIGN FOR ALL AGES

WHAT?

Universal Design



Buffalo, NY

Aging in Place

WHY ?

**AGING in the
PLACE of
YOUR CHOICE**


Throughout life...

CHANGE HAPPENS

Life CHANGES

“Life is what happens to you while you're busy making other plans.”

John Lennon



Life CHANGES

No matter our size...



...our age



PLAN AHEAD

...or our ability



POLL:

In the U.S. how many Americans fall into a "disabled" category?

- 20 million
- 54 million
- 78 million

Did You Know?


**54 million Americans are disabled
It is the largest minority**

- 20.8 million adults and children in the U.S. have diabetes
- Arthritis is the leading cause of disability
- There are 120,000 annual hip replacement operations in the U.S.

The Biggest Investment!

- Over 75 percent of Americans ages 45 to 54 are homeowners.
- Over 80 percent of Americans ages 55 to 75 own their home.

U.S. Census Bureau



HOME EQUITY

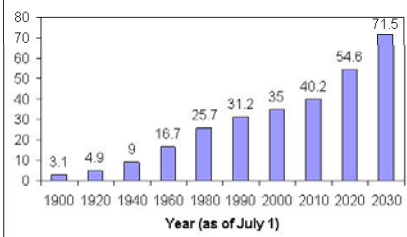
Consider the Challenges

Boomers & Beyond

- 89% of homeowners over 45 prefer to remain in their homes
- 80% of the population will require special housing needs at some point
- Where they live at age 65 will be the place 70% will live the remainder of their lives.

Shifting Demographics

Figure 1: Number of Persons 65+, 1900 - 2030 (numbers in millions)



THE NUMBERS ADD UP + + +

- People who reach 65 have an average life expectancy of 83.5 years
- By 2010 the 85+ population will be at 6.1 million (40% increase from 2000)
- By 2020 they will be 23.6% of the elderly
- In 2025, Americans over 65 will outnumber teenagers by more than two to one.

Administration on Aging
World Health Network

A HOME FOR ALL REASONS

Can it adapt to changing needs?



Birth of children



Health challenge



Disabling accident



Visit of elderly relative

AGING IN PLACE

- MAKING THE HOME EASIER TO GET AROUND IN AND TO MAINTAIN ARE HIGH PRIORITIES FOR RESIDENTS AS THEY AGE.

(ASID Aging in Place Study)

- RETIREES OFTEN SPEND MORE TIME AT HOME



Eskaton, Roseville, CA

VISITABILITY

- How accessible is the home for grandchildren?



- What about elderly relatives?



- What about friends who might be on crutches, in a wheelchair... even if it is a temporary need?

UNIVERSAL DESIGN PRINCIPLES

- Principle # 1: Equitable Use
- Principle # 2: Flexibility in Use
- Principle # 3: Simple and Intuitive Use
- Principle # 4: Perceptible Information
- Principle # 5: Tolerance for Error
- Principle # 6: Low Physical Effort
- Principle # 7: Size and Space for Approach and Use

Resource: Center for Universal Design North Carolina State University

LIFE CREATES CHALLENGES



EVER HAPPENED TO YOU?

- handles you can't grasp,
- controls you can't operate or see,
- seats that don't fit your bodies,
- doors you can't open or close,
- floors that cause you to slip,
- shelves you can't reach,
- alarms that are too loud or inaudible.

ASK YOUR CLIENT:

- Is their home designed so they can gracefully age in place?
- Will their home still be comfortable as they age?
- Will their home allow them to maintain their independence and dignity?
- How "age-friendly" IS their home?

"For tomorrow belongs to the people who prepare for it today"
African Proverb quotes

LIFE HAPPENS...



Think...



may be the catalysts that
force someone out of their home

Their Home's Value

➤ **HOW DOES THEIR HOME MEASURE UP?**

Change Is Good...

A home designed for **YOUR CLIENT** to age in place will also increase the resale value.

A GOOD INVESTMENT

- ◆ Average per year is \$76,285 in a Medicare certified nursing home
- ◆ Base cost for assisted living facility is \$36,096 (private one bedroom) excluding one time entrance fee

This is JUST room and board

Urban areas usually 17% higher

2008 figures
Genworth
Financial

MARKET THE VALUE ADDED

- ◆ Take several years of either current nursing home or assisted living costs and **INVEST** that money for remodeling now
- ◆ To insure they will be able to remain there as long as they **CHOOSE**

Help them to “Age-proof” their home!

Throughout life...

CHANGE HAPPENS

Think...

- At age 55 many of you may be caring for an aging relative and/or seriously planning for retirement
- If you have no disability, have no family member with a disability, do not know anyone with a disability....

YOU WILL

BOOMERS AND THEIR PARENTS



“I never thought how challenging it would be to go in and out the front door holding a baby or pushing a stroller”

“Until I had arthritis I never realized how difficult it could be to get in and out the front door especially when you are carrying packages.”



Live ...



ANTICIPATE & PLAN



EASY LIVING HOMES

> Berming landscape to provide step-less entry



EasyLiving Home
Bonhambuilt, Inc.

> Driveway and garage elevated so vehicles do climbing



EasyLiving Home and
Universal Design Home
Traditional Homes of Georgia

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 THURSDAY, APRIL 24, 2003

Going Up? Elevators Invade Suburban Homes

Handi-Lift

Waupaca Elevator

Universal Design / At Home

Livable Lifetime Show House – an EasyLiving Home™

Universal Design Alliance

Living Room – Anna Marie Hendry, Allied Member ASID

Designed For a Lifetime

Livable Lifetime Showhouse, Atlanta, GA
 Universal Design Alliance
 Outdoor Deck off Sunroom
 Holly B. Peck, Designer

Change...

Delivering change to a client's home?



Universal Design
Demonstration
House
Bristow, VA



Livable Lifetime Showhouse
Laundry/Craft Area
Candace McNair, ASID



Eskaton Demonstration
Home, Roseville, CA




Great
Grabz

Educating the Public

The Universal Design

Demonstration House Project



Bristow, VA

A Collaboration



On-grade from driveway
to porch (sloped
walkway)



Collaboration of:
Prince William County
with Devereaux &
Associates Architects
and Centex Homes



- No step at entrance
- Double door with 24" hinged
sidelight + 36" wide door = 60"
wide door opening when needed
- Non-slip floor tile in foyer

2009 Livable Homes

Eskaton National Demonstration Home, Roseville, CA



NorthCenter Senior Campus, Chicago, IL



Green Lake Residence Seattle, WA



North Morningside Craftsman Atlanta, GA

Photo Credits: Jay L. Clendenin, for AARP

Convenience and Safety



Eskaton Demonstration Home Roseville, CA



Green Lake Residence, Seattle, WA



Today: Convenience
Tomorrow: Independence

Photo Credits: Jay L. Clendenin, for AARP

All Ages --- All Abilities



Eskaton Demonstration Home, Roseville, CA



North Morningside Craftsman, Atlanta, GA



Photo Credits: Jay L. Clendenin, for AARP

Green Lake Residence, Seattle, WA



SAFETY AND SECURITY

- Remote Lights
- Security
- Garage door



Motion detector lighting



Lutron RadioRa2 or Lutron HomeWorks



Convenience AND Independence



HAI



HomeLogic



AMX



Life ware

- 01 Lighting Control
- 02 HVAC Control
- 03 Security Control
- 04 IP Cameras
- 05 Touch Panel
- 06 Media Server
- 07 Home Server
- 08 Personal Computer
- 09 Mobile Phone
- 10 AV Equipment
- 11 Audio Distribution
- 12 CO Detector
- 13 Occupancy Sensor
- 14 Water Sensor
- 15 Smoke/Heat Detector
- 16 Shade Control

Health, Wellness, and Social Technology



Savant TrueImage



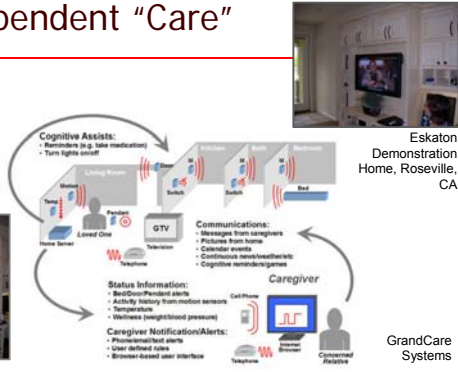
Intercom Systems



Dakim Brain Fitness

Independent "Care"

Eskaton
Demonstration
Home, Roseville,
CA



Eskaton
Demonstration
Home, Roseville,
CA

GrandCare
Systems

CUT THE GLARE ADJUST THE LIGHT



Lutron QED

Accessible
for all



Pico™ wireless

Radio
Power
Savr™

LIGHTING AND ELECTRICAL

Improper or inadequate lighting is most commonly linked to falls in the home.

(National Safety Council)



Solatube

Let in
the
light



Lutron
Lamp Dimmer



GOOD LIGHTING AND ENERGY CONSERVATION



Lite Touch



Lutron Eco-Home

Dimming your lights
can save
30%
on electricity costs
24%
lights last on average
3.8 yrs
1 year savings
\$60.40

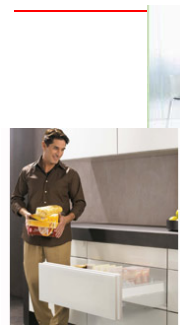


Compact
Fluorescent

Dimming your lights
can save
70%
on electricity costs
56%
lights last on average
10+ yrs
1 year savings
\$116.25



Design in Motion



Hettich



Grass USA
Sensotronic



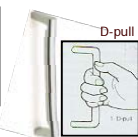
Blum Servodrive

ADAPTABILITY

A MATTER OF INCHES



Egress Lite by
Sentry Light



Sugatsune

Threshold
ramp



Van Duerr Industries



Viking



Brizo



Amplified Photo
Phone




Offset hinges

DO YOU PLAN TO FOLLOW THE CROWD?

OR...


WILL YOU BE AMONG THE LEADERS?




This concludes the American Institute of Architects (AIA) Continuing Education Systems (CES) program.

← Thank you.

Questions? →



Thank You!



education-works,
inc.
Dallas, TX
888-339-6757

Resources

CEDIA Member Electronic Lifestyles® Finder Service

www.cedia.org

Home Technology Alliance information:

www.www.cedia.org/outreach/hta.php

www.nahb.org/hta

CEDIA *Crosspoint*:

www.cediacrosspoint.com

Glossary of Terms

Amplified Volume Control Systems: An amplified volume control systems is a single-wire solution that delivers music to multiple rooms via a central control box. Some of these systems make use of CAT 5 cable to deliver the un-amplified audio signal to each room, where an in-wall amplifier and speakers reproduce the music.

Analog: In the consumer electronics world, analog technologies are those that use traditional methods of receiving, recording, and/ or reproducing content or communications. Examples of analog technologies include VHS VCRs and cassette tapes.

Aspect Ratio: The ratio of the width to the height of an image. Analog television uses a 4:3 or 1:1.33 ratio (slightly rectangular, being wider than it is tall), while digital television uses 16:9 or 1:1.78 (almost twice as wide as it is tall).

Asymmetric Digital Subscriber Line (ADSL): A form of DSL broadband service, it is called "asymmetric" because of its two-way bandwidth is devoted to the downstream direction, sending data to the user.

Audio Distribution Amplifier: These are amplifiers that distribute the input from a single audio component to multiple audio outputs or locations.

Bridge: A bridge is a device that connects two similar networks together to increase the distance or number of devices a given type of network can handle.

Broadband: Broadband refers to telecommunication that provides multiple channels of data over a single communications medium. Typical examples of consumer broadband services are high-speed internet delivered via cable, Digital Subscriber Line (DSL) or fiber-optic networks.

Cable Modem: A cable modem is a device that enables connection to the internet and sends/ receives data via a local cable TV provider.

Category 3 Cable (CAT 3 Cable): Used for medium-speed communications of up to 10 megabits over a distance of up to 100 meters. The FCC has specified that new homes use a minimum of CAT 3 wiring for telephones in new home construction.

Category 5 Cable (CAT 5 Cable): Network cabling that consists of four twisted pairs of copper wire terminated by RJ45 connectors and is capable of up to 100 Mbps over distance of up to 100 meters. Commonly used for data and telephone, it is now widely used for distribution of audio signals and is often used in new home construction.

Category 5 Enhanced Cable (CAT 5(e) Cable): Supports short-run 1000baseT (1,000 Mbps) networking by utilizing all four wire pairs. CAT 5(e) is backward-compatible with CAT 5 cabling.

Cathode Ray Tube (CRT): CRT refers to the traditional glass picture tubes that have been used in analog TVs since their inception. CRTs are also used in some rear-projection TVs.

Cluster: A hardware connection between two or more PCs that forms a closed network or internal network for sharing data and processing tasks among connected PCs.

Coaxial Cable: Coaxial (coax) wiring is often used to distribute video signals but can also be used for other types of communications. There are several varieties of coax cable used in homes such as RG59 and RG6, the latter of which is recommended for all new wiring for cable and satellite TV.

Cogeneration (Also known as combined heat and power, CHP): CHP is the use of a heat engine or a power station to simultaneously generate both electricity and useful heat. It is one of the most common forms of energy recycling.

Color Saturation: A term to describe how vivid and intense colors in the display appear, independent of brightness. If the color saturation is too low, colors appear washed out, but if the color saturation is too high, colors may appear too vivid.

Contrast: The relationship between the lightest and the darkest areas on a display device or picture. A small difference means low contrast and a large difference means high contrast.

Dedicated Wire: Wiring that is installed specifically for communications. It includes twisted pair wiring used for Ethernet networks and coax wiring used for cable TV, etc.

Digital: Digital describes electronic technology that generates, stores, and processes data in terms of two states: positive and non-positive. Positive is expressed or represented by the number 1 and non-positive by the number 0. Thus, data transmitted or stored with digital technology is expressed as a string of 0's and 1's.

Digital Video Recorder (DVR): A video component (set-top box) with an integrated hard drive for recording and time-shifting television programming. DVRs may contain an integrated tuner for receiving cable, over-the-air, satellite and/ or HDTV broadcasts. The most popular example of a DVR is a TiVo. DVR functionality can also be integrated into other devices such as a home computer or television.

Ethernet: Ethernet is the most widely-installed local area network (LAN) technology, which uses coaxial cable or special grades of twisted pair of wires.

Firewall: Security measures (hardware and/ or software) that blocks unauthorized users from gaining access to a computer or network.

Graphic User Interface (GUI): A technology for interfacing with computer software by pointing (mouse) to graphic images (windows, icons, menus) instead of typing text. Apple's Mac Operating System and Microsoft's Windows are the two most popular computer GUIs. On consumer electronics products, GUIs are commonly used to program VCRs and setup video displays via their on-screen menu.

High Definition Multimedia Interface (HDMI): A single high-bandwidth cable that can carry both digital audio and video signals from an HDTV receiver, DVD player, etc., to a video display and/ or multi-channel audio receiver/ processor.

Home Automation: Systems that provide convenient centralized access, usually via keypad or PC, to various controls and appliances within a home. Home automation systems allow for the remote control of such items as lighting, thermostats, locks, pet care, pools and spas, landscape watering, blinds and window treatments, multi-media systems, etc.

Home Network: A home network interconnects electronic products and systems, enabling remote access to, and control of, those products and systems, as well as any other available content such as music, video, or data.

Hush Box: A hush box is an enclosure around a projector that muffles the noise and typically has an exhaust fan that acts to pull out the heat from the projector to avoid overheating.

In-ceiling, In-wall, On-wall Speakers: Speakers can be installed in ceilings, walls, and floors as necessary to blend subtly with room décor. Today's in-wall and in-ceiling speakers are capable of the kind of performance associated with free standing speakers except that they can be flush-mounted or hidden almost anywhere.

LCD: A video display technology that uses a liquid crystal display, rather than the traditional picture tube, to display video images. Many of today's flat panel TVs and monitors use LCD technology to achieve a super-thin cabinet design.

Local Area Network (LAN): A network of personal computers and peripheral devices configured to share information over a short distance, usually within one home or building.

Media Server: A device that stores, organizes, and distributes digital content (audio, video, etc.) to other electronic devices.

Modem: Short of modulate/ demodulate, a modem modulates outgoing digital signals from a computer or other digital device to analog signals for a conventional copper twisted pair telephone line and demodulates the incoming analog signal and converts it to a digital signal for the digital device.

Multi-room Audio Distribution: Multi-room audio refers to any audio system that can distribute sound to speakers in multiple listening areas. In its most basic form, a multi-room audio setup contains a source component, like a CD player or an amplifier and is connected to speakers in at least two different rooms.

Phantom Load: Refers to the electric power consumed by electronic appliances while they are switched off or in a standby mode.

Plasma TV: A type of flat-panel video display that uses a special gas sandwiched between layers of glass. When the gas is electrically charged, the gas moves into a "plasma" state and illuminates phosphors, which produce a picture.

Radio Frequency (RF): RF waves can be transmitted and received through walls and other physical barriers and differs from IR (infrared) technology, which requires a clear line-of-sight between transmitter and receiver.

Residential Gateway: A device that allows customers' premise equipment which is connected to in-home networks to access and use services from any external network regardless of media.

Router: A device used to connect two networks, and most commonly used in residential applications to connect a home network to the internet.

Standby Mode: Refers to a low power mode for electronic devices such as computers, televisions, and remote controlled devices. These modes save significant electrical consumption compared to leaving a device fully on and idle and allow the user to avoid having to reset programming codes or wait for a machine to reboot.

Sub-system: Any system in a whole-house system that accepts commands from another system and/ or gives feedback to that system.

Structured Wiring: A system of low-voltage wires (not power line) designed to carry electronic signals throughout the home.

Systems Integrator or Installer: This specialist works with all the trades in the design and build process to plan, design, program, install, and service low-voltage electronic systems and equipment in the residential market.

Twisted Pair Cabling: Cable constructed of two braided wires, each with its own dielectric insulation twisted together to form a single cable. The twisting allows the cable to carry higher frequency signals than the cable could otherwise. Most twisted pair cables used in the home such as CAT 3, 4, and 5 include four of these pairs of wires within an outer insulating sheathing. There are two basic types of twisted pair cables: shielded and unshielded. Most applications in the home use unshielded four-pair cable.

User Interface: Devices such as volume controls, keypads, and LCD touchscreens that allow control (to varying degrees) of a home's electronic systems. There are a wide variety of user interfaces available and most can be mounted in the wall or are designed for the table-top or counter.

Voice Over IP: Voice telephone service delivered via the internet. A major advantage of VoIP and internet telephony is that it avoids the tolls charged by ordinary telephone service.

Whole-house Network: A whole-house network involves multiple types of cluster networks connected to each other through devices called gateways. This type of network is the most complex but it also provides the most functionality.

Widescreen: Any video software or hardware with an aspect ratio wider than 4:3; usually 16:9, which is the optimum ratio for viewing anamorphic DVDs and HDTV broadcasts.