

residential marketing

*Your home, smart home, smart living.*

**CLIPSAL**  
LIVING ELECTRICAL



# Wiring for *intelligent homes*

The benefits of home automation

**Joe Crawford**  
Product Manager – Residential  
Installation Systems & Control

**Schneider**  
Electric

## Schneider Electric

- Schneider Electric:
  - Specialise in the manufacture and sale of products and solutions for electrical distribution, Industrial control and automation, as well as residential wiring devices.
  - Global company employing 120,000 world-wide.
  - Irish head office, Maynooth, Co. Kildare

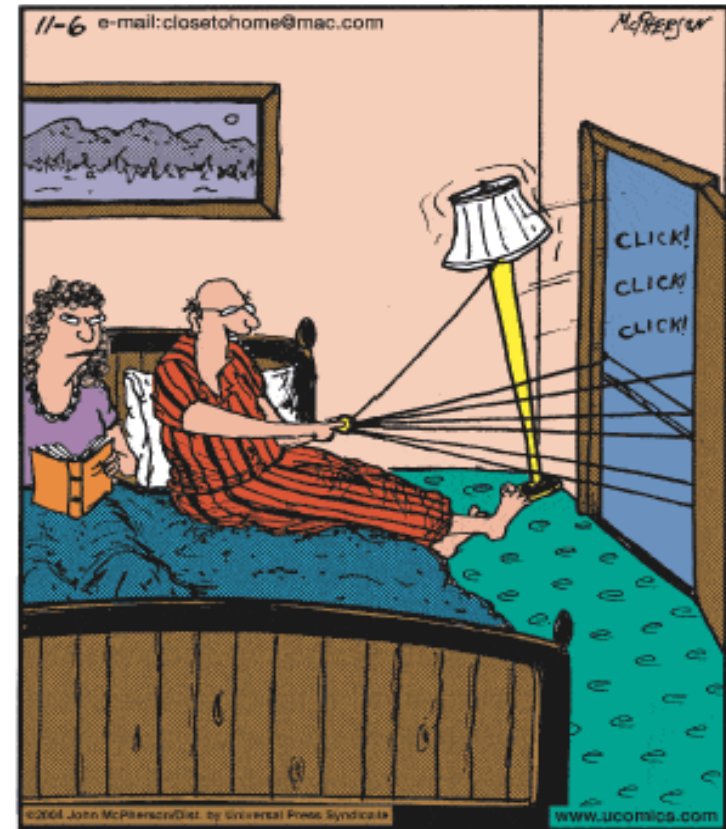
Making the most of your Energy

## What is a smart home?

- There are a lot of misconceptions about this
  - Based on individuals opinions and their financial interests
- Some say it is “structured cabling”
  - Distribution of Pay TV, Data, Video around the home
- Others say it is “home automation”
  - Central control of lighting and devices
- While still others say it is “intelligent appliances”
  - IP addressable devices such as LG's internet fridge

## The bottom line is this.....

- A smart home utilises any OR ALL of these technologies to enhance the lifestyle of the occupant
- It will vary according to different peoples lifestyle & needs
- That's it... simple!



"... then I just give it one good yank, and voila!  
All the lights in the house turn off at once!"

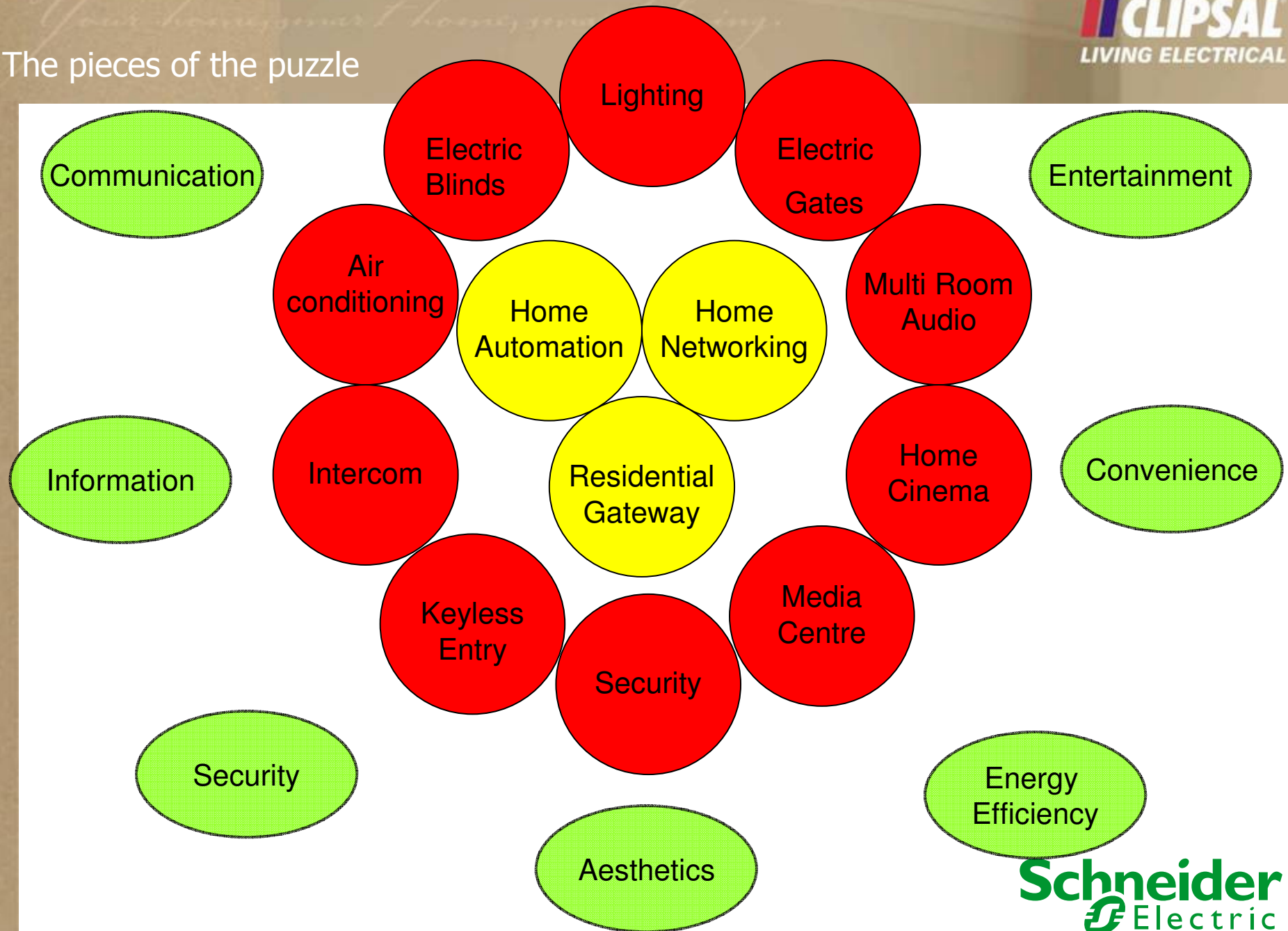
## So what is home automation ?

- Automatic or simplified control of routine tasks
- They can be one touch:
- They can be to a schedule:
  - One button that turns several lights on when you get home
  - Heating to turn on at a particular day and time
- They can use logic:
  - IF sunlight shines on the windows THEN close blinds

## So what is “system integration”

- The combination of several automated technologies:
- Press the “welcome home” button inside front door:
  - Lights come on, garage door closes, air conditioner starts cooling
- Press “Play DVD” on a remote control
  - Plasma TV turns on, lights dim, DVD player starts playing
- Press “Goodnight” button next to bed
  - Lights fade out, security system arms, air conditioner turns off

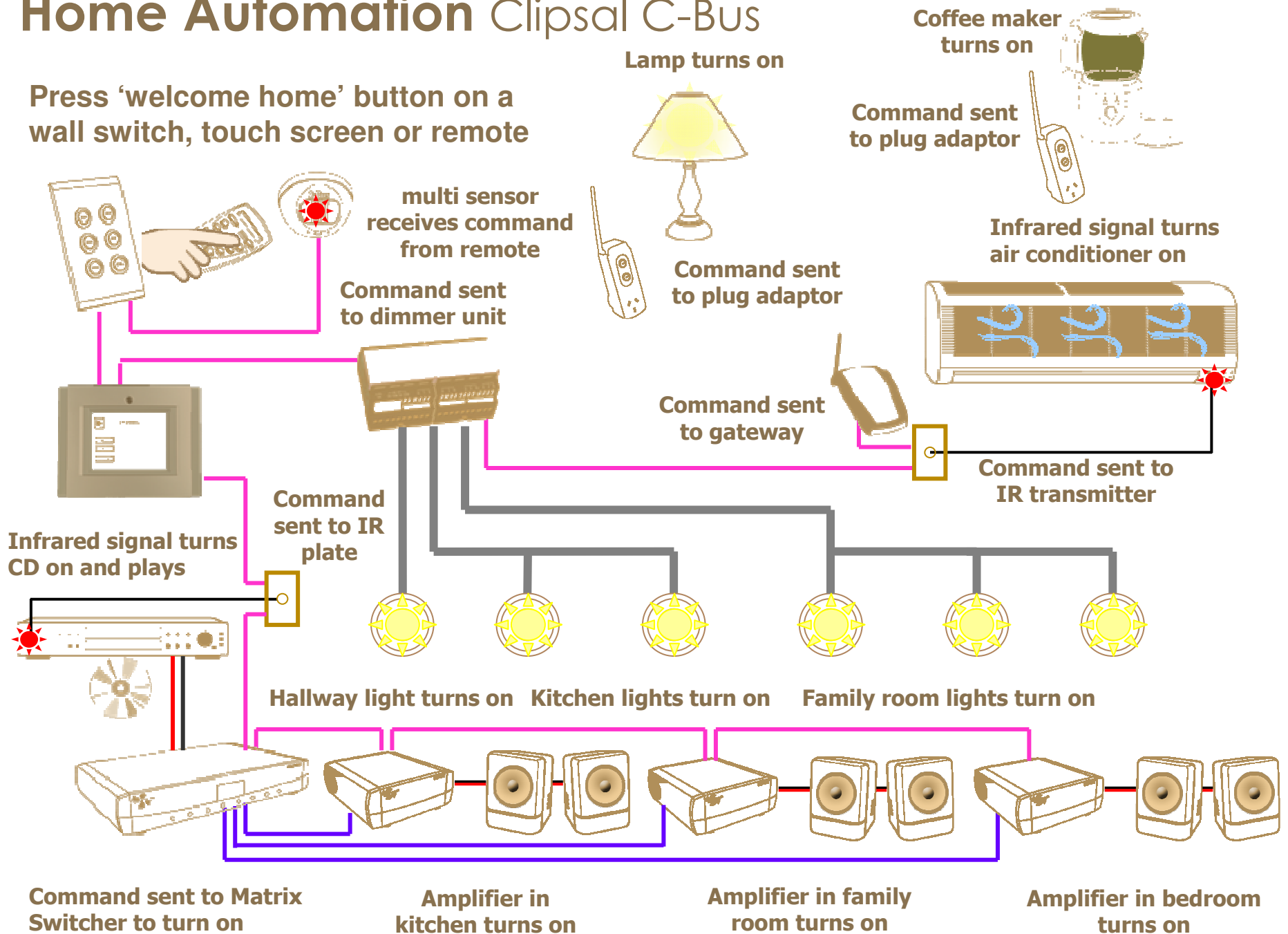
## The pieces of the puzzle





# Home Automation Clipsal C-Bus

Press 'welcome home' button on a wall switch, touch screen or remote





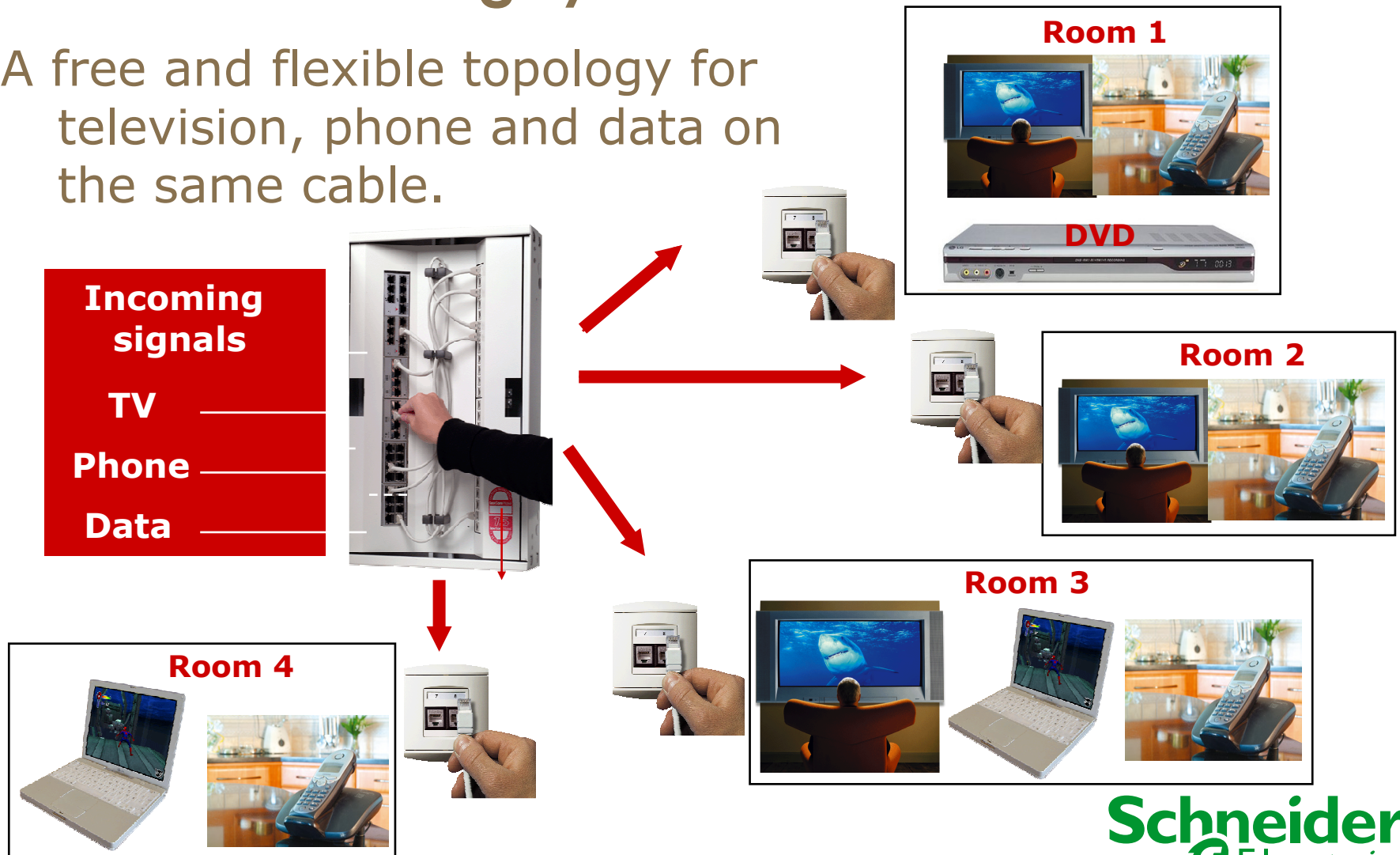
## And it would all happen instantaneously!

- It could be any combination of anything electrical
- It could even vary according to the time of day
- Changes adjust automatically according to the season

Limited only by your imagination

## A structure cabling system

A free and flexible topology for television, phone and data on the same cable.



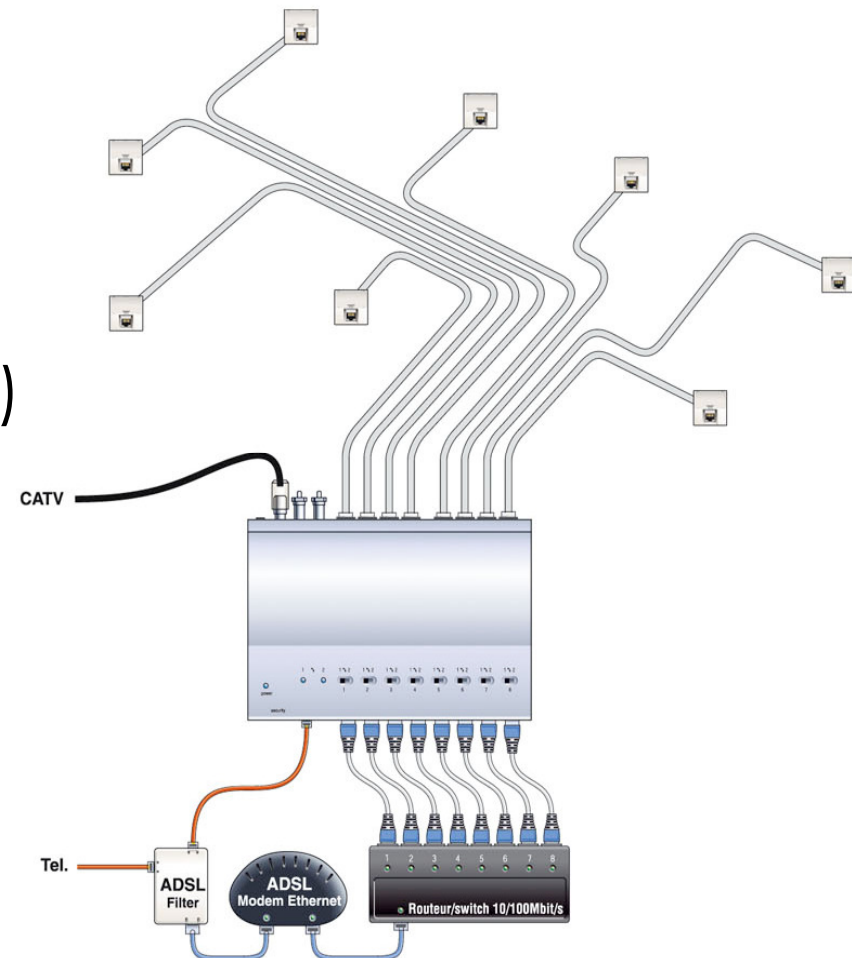
## Delta 8, The "All in one" concept

- The Delta 8 network is based on a all-in-one central unit which allows the permanent distribution in every room and on any outlet of:
  - TV & radio
  - Telephone lines
  - Data applications
- One type of link supporting the complete installation, using:
  - Normalized RJ45 interface
  - Balanced cable
- 8 cable links/box:
  - Full cable sharing of the 3 integrated services
  - Equivalent (in functionalities) to 24 service outlets



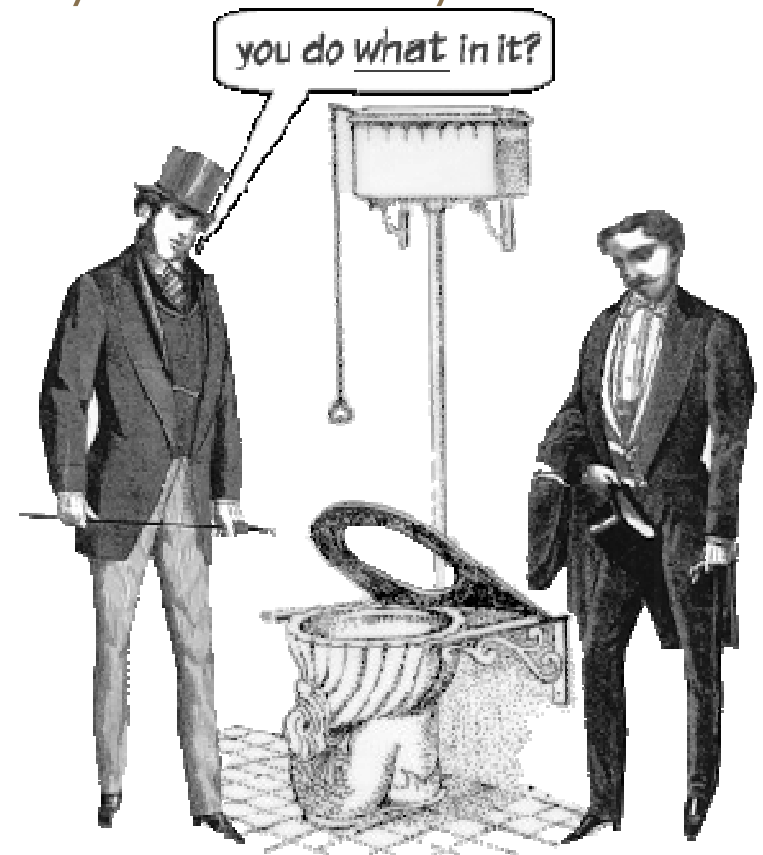
## Typical Delta 8 Configuration

- 1 CATV access
- 1 ADSL filter (non supplied)
- 1 ADSL modem/router (non supplied)
- 1 data switch (non supplied)



## Why do we need it ?

- Houses have been as they are for years.... Why change ?
- Imagine life without:
  - Remote Control TVs
  - Microwave Ovens
- Take it back further:
  - Electricity
  - Indoor Plumbing
    - I wonder if Thomas Crapper heard the same argument when he invented the flushing toilet in 1861?





## Here's a really good analogy

People EXPECT and DEMAND a certain level of smart technology when they buy a car

- Remote keyless entry
- Power windows
- Power mirrors
- Electric seats
- Climate control
- Light sensing headlights



- Cruise control
- Automatic transmission
- Blue tooth phone kit
- Reversing sensors

## And yet at home.....

We still live with.....

- Manually unlock the door
  - Manually turn lights on and off
  - Manually turn on air conditioner
  - Manually turn on music
- 
- Everything is stand-alone and isolated
    - There is no synergy
  - If you're lucky you'll get auto garage doors





## So why the difference ?

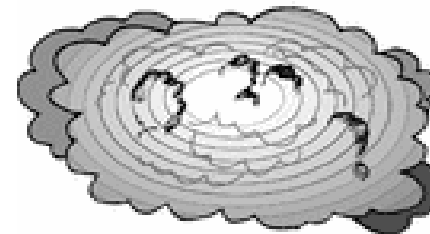
- Car manufacturers are competitive
  - They are aggressive about having points of difference
  - They realise that features will filter down
  - Their customers expect it
- Adoption of technology within the housing industry has not progressed at the same rate
- Why ?
- Are builders/developers under more price constraints?
  - Do they think home owners don't want or need it?
  - Is it "too hard" because of lack skilled installers?
  - Do electricians talk potential customers out of it?

## And yet technology has become essential

- Broadband has become the “4<sup>th</sup> Utility”
- The internet is now more important than the television
- More mobile phones than people!
- Entertainment is a core expectation
- Any content, anytime, anywhere is reality



ADSL Modem



Internet

## People are expecting the technology at home

- We are seeing an incredible growth in interest
- Lifestyle programs are promoting the added value
- Websites and magazines are driving the technology
- Major newspapers are running “smart home” articles
- Consumers are better educated about the lifestyle AND environmental benefits
- They understand that it is an investment

residential marketing

*Your home, smart home, smart living.*

**CLIPSAL**  
LIVING ELECTRICAL

# Key *Drivers*

**Schneider**  
Electric

## Enhancing my lifestyle – there are 5 key drivers

- Entertainment
  - Increasing the “wow factor” of my home cinema
    - driven by plasma TV sales & builders including home theatres
  - One-touch “scenes” for entertaining
  - Listening to music throughout my home
    - driven by MP3s, i-PODs & media centres



Party Scene

## Enhancing my lifestyle – there are 5 key drivers

- Convenience
  - “Welcome home” button that turns on lights, aircond & music
  - “Goodbye” button that turns everything off as you walk out the door
  - Remote control anywhere in the house
    - Or as you pull up in the driveway!



## Enhancing my lifestyle – there are 5 key drivers

- Comfort
  - “Goodnight” button that turns everything off at night
    - This is the favourite feature of everyone who has C-Bus installed!
  - Sensors that turn on hallway or pathway lights at night
    - Automatically at low levels to reduce dazzling
  - Timers with nightlight function for children’s rooms



Goodnight button



## Enhancing my lifestyle – there are 5 key drivers

- Security
  - “Panic” button that turns on every light to full brightness
  - “Vacation” button that gives the house a lived in look
  - Assisting living for elderly and disabled
    - Simply control next to bedsides or by remote

## Enhancing my lifestyle – there are 5 key drivers

- Energy Savings
  - Sensors that turn off lights when not needed
  - Dimmers that reduce energy consumption
  - Timers that turn things off automatically
  - “All Off” buttons to ensure everything is turned off



Light level Sensor



## Design is everything

- Home owners want products that look good
  - And easy to operate



residential marketing

*Your home, smart home, smart living.*

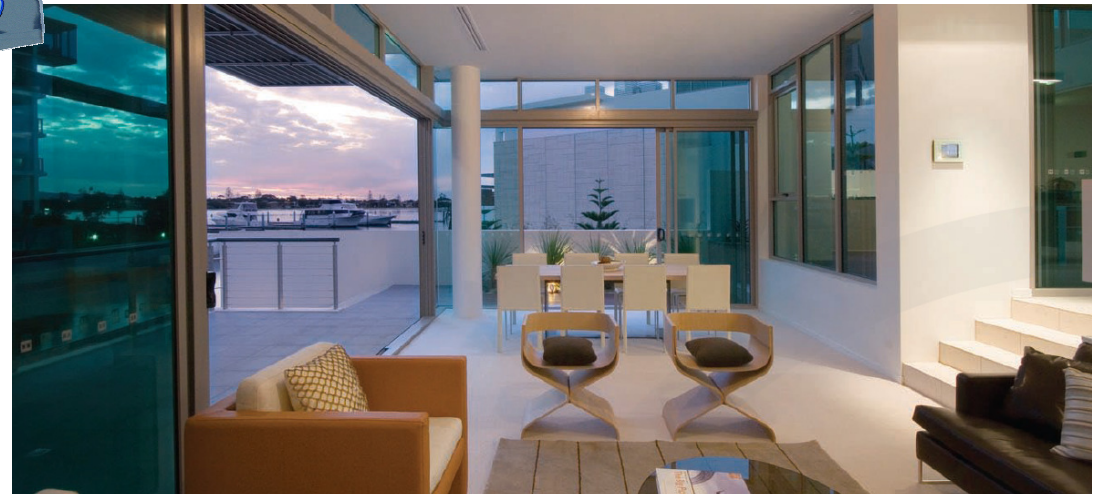
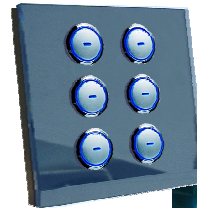
**CLIPSAL**  
LIVING ELECTRICAL

Not only for  
*The wealthy*

**Schneider**  
Electric

## From luxury home and penthouses

- Fully integrated system including:
  - Lighting control
  - Motorized blinds and curtains
  - Air conditioning control
  - Distributed Audio
  - Home Cinema
  - Security
  - Intercom





## To one bedroom apartments or a single room

- Add convenience on a limited budget
  - Can be as simple as a remote control lamp
  - Scenes such as “all off”
  - Control basic appliances
  - Can be added to at any time



So why would  
*you include it?*



## The Builder & Developer

- Increases the appeal of the home
  - Gives it “wow factor”
  - Makes it stand out from the crowd
  - Makes it feel modern and future proof
  - Provides energy saving factor
  - Increases the value
  - Increases the salability
- 
- A home WITH home automation will sell or rent quicker than one without



## The Architect & Interior Designer

- The controls look better than a standard light switch
- It will maximise the art of the design
  - Lighting levels that adjust according to ambient light levels
  - Scenes that ensure features are highlighted
  - Control to prevent washing out of colours and textures
- A good lighting control system will bring out the very best in your design... whether it's soft and subtle warmth, or stark modern contrasts
- It will ensure an excellent project is always seen in its full potential

## The Environmentalist

- C-Bus is an excellent way to reduce energy usage
- Dimmers reduce power and increase lamp life
- Motion sensors only turn on lights when needed
- Light sensors reduce light levels with ambient light
- Timers things off automatically
- Schedules & “all off” turn off all lights and stand-by devices
- Smart programming can reduce light levels, temp levels, thermal transfer ... you name it.

residential marketing

*Your home, smart home, smart living.*

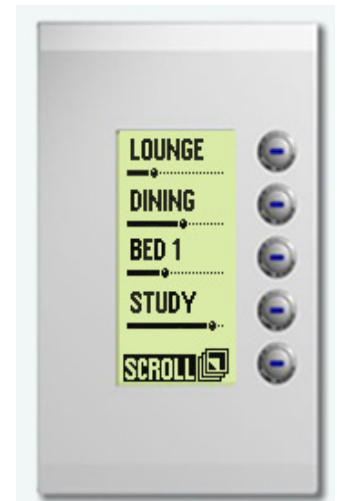
**CLIPSAL**  
LIVING ELECTRICAL

# In summary

**Schneider**  
Electric

## So there you have it

- The awareness of smart homes is on the increase
- Technology is not longer an option
- It will enhance the lifestyle for the occupants
- It will enhance the design and interior
- It will increase the value of the property
- It will allow more with less power
- Those who have it, wouldn't live without it
- It's not something way off in the future – it's now!

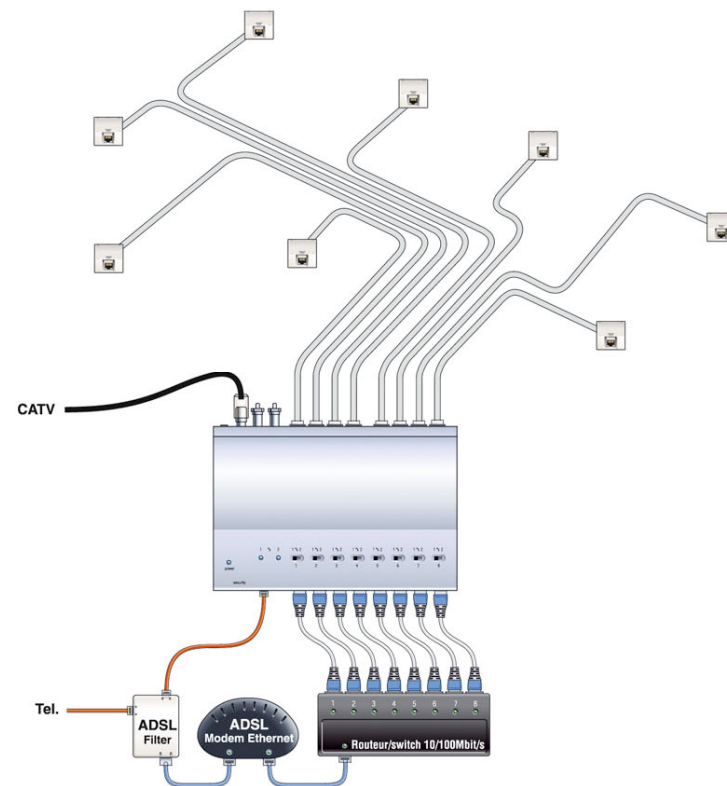
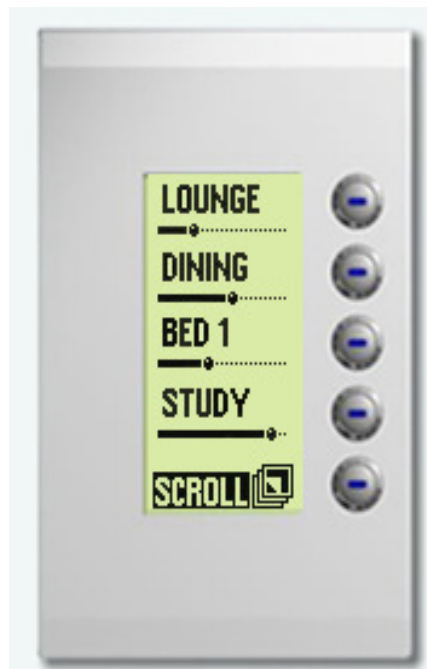


Making the most of your Energy

residential marketing

*Your home, smart home, smart living.*

**CLIPSAL**  
LIVING ELECTRICAL



**Schneider**  
Electric

residential marketing

*Your house, smart home, smart living.*

**CLIPSAL**  
LIVING ELECTRICAL



Broadband



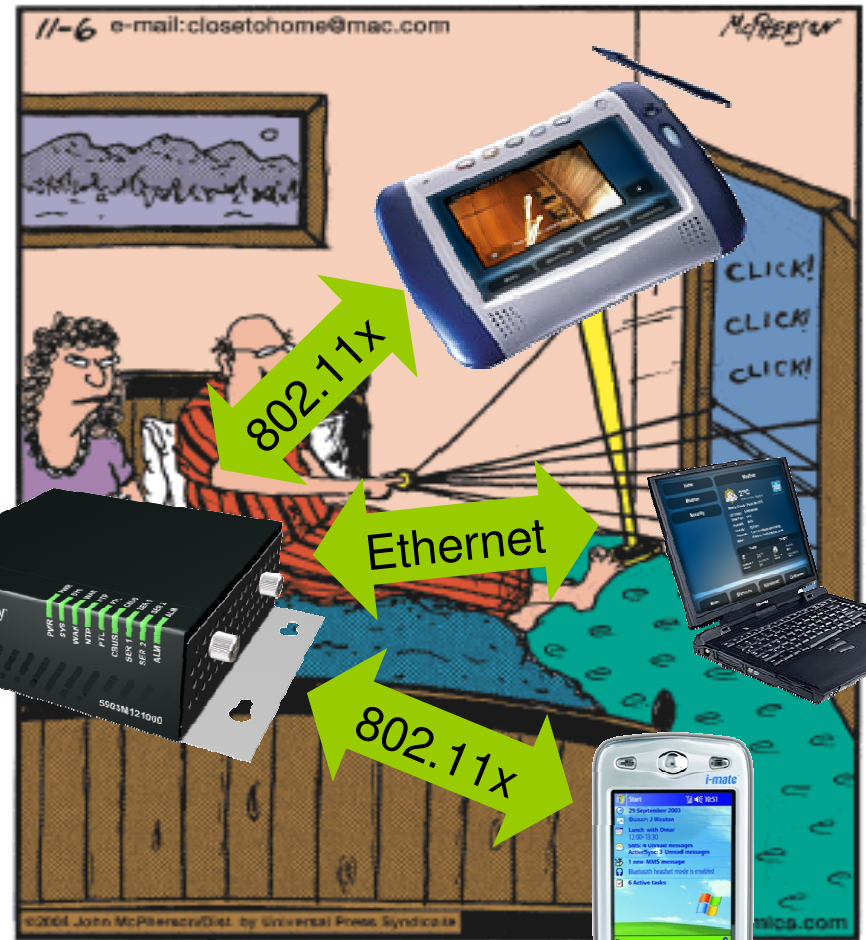
GPRS



802.11x

Ethernet

802.11x



"... then I just give it one good y... voila!  
All the lights in the house turn on..."

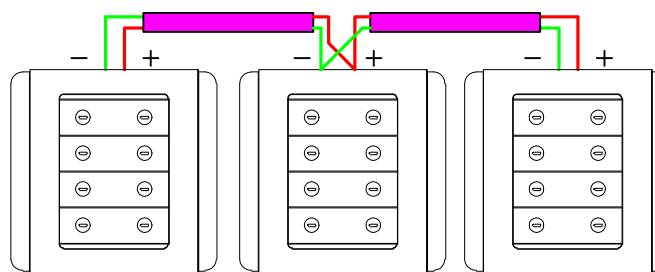
**Schneider**  
Electric



residential marketing

*Your home, smart home, smart living.*

**CLIPSAL**  
LIVING ELECTRICAL



**Schneider**  
Electric

residential marketing

*Your home, smart home, smart living.*

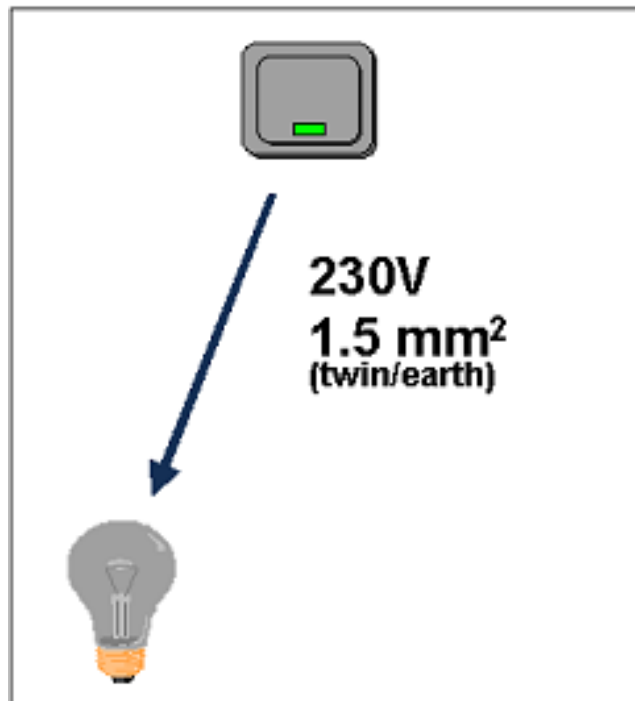
**CLIPSAL**  
LIVING ELECTRICAL



**Schneider**  
Electric

## C-Bus wiring compared to conventional

**Conventional Wiring**



**C-Bus Wiring**

