



FACE TO FACE
DIGITAL

HOME OWNER'S BRIEFING BOOKLET



HOME OWNERS' CHARTER

We believe that you should demand that your specialist...

1. can explain to you in layman's terms the benefits of the technologies available to you
2. will only recommend systems that are simple to use, do not exceed your needs, and are reliable
3. will appreciate your design intentions and integrate your systems using aesthetic sensitivity and clear project management
4. will take end-to-end responsibility for the final operation of the system from first meeting, through site cabling, to installation and then support it for multiple years thereafter to ensure satisfaction

NEW BUILD, REFURBISHMENT OR RETRO-FIT

In Our Experience: what's possible & effective

As technology develops manufacturers are trying to make it easy to adopt their products and therefore many technical systems can be partially retro-fitted. Predominantly they do this using WiFi or other RF (radio frequency) communications which can be ideal. However, the more RF devices are installed the more problematic and unreliable it becomes - so one must be wary of this approach (as discussed in our Fact Sheet "Cabling, why WiFi just won't cut it").

The most important thing is to discuss whatever new technology is in question with a specialist firm who can examine the property (in the case of retro-fit) or the plans and lay out the best options. In every case, it is best to make sure that the specialist will take end-to-end responsibility right from this design discussion, through cabling to installation and on to multi-year support.

Some Fundamentals:

- Good technologies for retro-fit: heating controls can be fitted to radiators and under-floor heating systems with relative ease and can give a mid-teens return on investment from the first year. Obviously IT systems and many aspects of home entertainment can be retro-fitted but there is a significant difference in doing it ad hoc or taking a planned and professional approach even when using great consumer systems like Sonos. Telephone systems, door entry and other "gateway" services like fast broadband provision can also be retro-fitted if done with care and planning.
- Anticipating the Future: where it is possible to put in a proper structured cabling solution, it is vital to lay cable with an eye to the future and for your specialist to have an understanding of what is coming over the horizon as far as is practicable. For example, items such as dishwashers and washing machines, that would not be thought to require anything but power, will soon synchronise with the grid to run at the most cost effective times of night; they will therefore need their own data connections and, as ever, a cable is the cheapest and most reliable method.
- Standards: by far the world's most common data connection is that of Cat5e. This is what is installed in most offices. Because of its enormous installed base, most manufacturers of high bandwidth video-over-data-cabling solutions design for Cat5e as their minimum specification. However, many practitioners of home technology suggest Cat6 should be used as it has better shielding from interference (even cable is susceptible) and higher potential throughput. This is sensible advice in some installations where the larger diameter cable, wider bend radii and more complex terminations are not problematic. (So called Cat7 and Cat8 are not ratified standards and should be ignored.)

Things to bear in mind when evaluating this technology

- What does flood wiring really mean? All cabling should be carefully planned, terminated & tested
- Try to work with open architectures to allow future flexibility (be cautious of systems like Crestron and B&O that need proprietary cabling)
- Keep an eye on the future: cabling is cheap but opening up walls & floors later is not
- Where retro-fitting is attempted it is vital to keep reliability in mind so avoid jointing onto old cabling
- Bear in mind the usefulness of new areas of technology like heating & lighting control to offset today's high energy costs
- Historic houses can benefit hugely from the careful & sympathetic introduction of technology



THE GATEWAY TO THE HOME

In Our Experience: what's possible & effective

In the past people have considered their front door to be the entry-point of the home and this physical barrier is the clearest delineation of your physical defensible space. However, we now live in a connected world where people can demand your attention when at home not just by physically arriving at your gate but by calling, emailing, texting and using the other virtual 'gateways' to the home. As such, the modern world demands that designers and home owners consider all of these connections as a whole and hire a specialist to manage them properly.

This entails approaching door entry equipment, telephone lines and systems, internet connections and mobile phone coverage as a total package. This gives the home owner the tools to decide quickly & efficiently whether their home life can be interrupted by a caller, be they physical or virtual.

Some Fundamentals:

- **Cocoon:** it is easy to feel hounded in the modern world. The home as a total haven away from work is no longer possible or popular, yet it is vital to maintain the ability to retreat, to 'cocoon' when needed. Modern technology can do this: for example we can make door entry systems ultra convenient and integrate them onto devices with other functions so they are always at hand (see FFD Fact Sheet on Getting Technology Out of Your Way). Intelligent telephony can forward your mobile to your landline in places with limited connectivity or vice versa when away from the house.
- **The Back Door:** In the same way that the home owner needs better tools to screen interruptions in their home, they also need systems that they can access and manipulate when physically away from the home. Heating controls need to have a 'back door' via secure internet access to let them be controlled remotely. Equally security and camera systems can be monitored by the home owner if the systems have been set up correctly. The physical security of the gateway to the home is important not just to keep people out but let the right people back in, physically and virtually.
- **The Building Phase:** historically door entry, telephony, broadband supply, audio-visuals, IT, heating control and intelligent lighting have all been very separate services with a different specialist for each brought on by architects and designers in planning. The progress of technology means that these systems will never function effectively if planned and installed in these 'silos'. They all share common characteristics and should be designed together with a deep technological level from the start to provide ease of use, minimum aesthetic impact from their controls (see FFD Fact Sheet Getting Technology Out of Your Way) and an efficient service for the customer where all supplies are up-and-running on the move-in-date.

Things to bear in mind when evaluating this technology

- This service should be included in any property even if they turn down other household technologies like home entertainment or lighting control
- It is best to use one specialist firm to take a complete overview of, and responsibility for, the provision of all 'gateway' services
- Efficiently selecting & ordering telephone lines, broadband & Sky services during the building phase is vital for a smooth installation
- An effective 'gateway' implementation can be seen as the final phase of the structured cabling work
- A reliable internet connection, either in the city or country, is now as vital as a working telephone line



THE HOME OFFICE

In Our Experience: what's possible & effective

The modern house is a more open-plan and fluid place than ever before: the family kitchen is at times a dining space, a place for relaxation and an office as one snatches a moment to answer emails over a cup of coffee. The 'Home Office' is less a defined area within the home (although it can certainly still be that) but a state of infrastructure that allow you to be productive and efficient.

Many people build out their working capability at home on an ad hoc basis: using the WiFi access point that came free from their broadband supplier and perhaps adding a budget printer. Back-up for vital photographs and media purchases, emails, financial records and other data are infrequent & reliant on remembering to carry them out. This structure is fine until the chips are down and important, time-critical tasks need to be carried out or recovery is attempted following a crisis such as burglary or house fire. In these instances, having taken an informal approach usually leads to disaster. We can set all your systems up right to avoid this happening and we can provide maintenance to keep it working effectively.

Some Fundamentals:

- **Critical Systems:** because most people's IT set-up has grown incrementally over many years and often with minimal professional input (and when there has been some it is usually reactive problem-solving rather than design advice) it is often unreliable and lacks safeguards such as robust back-ups. Yet, in these same households the majority of the last decade's memories are stored in digital images and countless important emails, data files and other documents have accumulated. The sense of loss in the event of an IT failure is often significant and leaves people regretting that a more comprehensive approach was not taken to avoid disaster.
- **Efficiency:** although the home is not a professional base for the majority of us, employees can increasingly work from home for a day per week or more. When vital work needs to be done (either sporadically during evenings/weekends or when actually working from home during business hours) we can make sure that the connections are reliable, secure and ancillary services like printing really work.
- **Liaison:** we often team up with corporate IT departments to make sure that secure VPN connections or Bloomberg feeds, for instance, are put in place to allow financial services tasks to be undertaken without risk when communicating from the home to the office. Equally, we have many clients who start up businesses from home and whose needs then expand as the number of employees/collaborators grow and we set up and support small business IT in the same manner: with an emphasis on reliable, low cost, hardware-light systems.
- **By taking a complete view of household technology, we can co-ordinate the important functions of the home office seamlessly and broadly.** Whole house WiFi coverage, quick access to critical household systems like surveillance cameras, heating controls, office connections, back-ups and more are our stock in trade and when used in conjunction with our support service, any members of the household, including children at University, can be sure of efficient support and advice in case of need.

Things to bear in mind when evaluating this technology

- Are you confident about your back-ups being up-to-date and complete?
- In the event of burglary or fire will your back-ups disappear along with your main system?
- Is there someone to call for support when you are at home or out & about?
- With the proliferation of WiFi devices like iPads is the coverage throughout the house robust enough?
- Certain technologies (like WiFi printers) are simply unreliable but it is easy to do it properly



ENTERTAINMENT & THE SMART HOME

In Our Experience: what's possible & effective

For some customers 'home entertainment' can be as simple as a Roberts radio playing Radio 4 which they carry with them from room to room but those same customers may care deeply about having a reliable Sky installation to watch sports, for instance. For others, home entertainment requires a full home cinema set-up so that the visceral visual and audio impact of a movie comes across exactly as the director & producer intended it to.

Yet more customers want a home that is in some way 'smart' about their needs which often means that it makes them more efficient and productive in everything they do at home. This may mean reliable wifi to make it easy to finish the internet shopping, well thought-out door entry systems for seeing who's at the door or reliable IT to make replying to work emails easy in 30 snatched minutes between children's tea and bath-time.

The best 'smart homes' are not those with the largest TVs or most complicated video distribution systems, but those that satisfy customers' needs and yet provide a solid foundation for the easy adoption of future technologies should the customer want to embrace them at a later date.

Some Fundamentals:

- **Price Deflation:** it is now possible to put together a home cinema system for only a few thousand pounds, for instance, that will beat the experience you can get in your local multiplex. From multi-room audio to whole-house control systems, these products have never been so affordable. Even 'consumer' products like Sonos or Sky benefit from proper set-up and planning by a specialist because they remain deeply complicated products which require a solid foundation to operate reliably.
- **Performance & Multi-Room Living Spaces:** modern homes are less segregated than in the past and so the open family kitchen may be at once an entertaining space requiring good music, a relaxing place for family TV, a working space during the day etc. These multiple roles require carefully selected equipment to make sure that multi-use doesn't mean compromised results. Equally, it requires careful early planning & design to make sure all bases can be covered and that the technology stays in the background, so that only the solution is evident.
- **Anticipating the Future:** in the same way that our homes have multi-use spaces they also evolve over time. The responsibility of the 'smart home' specialist lies not just in the initial design but also in making sure that future requirements can be catered for. A top-floor bedroom, for instance, may become a home office with dedicated telephone lines and full IT facilities and all of this should be as easy as plugging in some cables without any need to redecorate. The home will soon see great changes in the way TV & utilities operate and both will require data connections that, in our congested WiFi environment, will be much more reliable and capable if they can be connected to existing data cabling. As such it is vital, not just for the successful implementation of entertainment & 'smart home' systems in your immediate project design, to lay cable with an eye to the future and for your specialist to have an understanding of what is coming over the horizon as far as is practicable.

Things to bear in mind when evaluating this technology

- The all new 'features' in tech marketing are often irrelevant or misleading - buy what actually matters
- How well will one unit work with another?
- Look for specialist controls to simplify the operation of all your equipment
- Popular 'high street' equipment like Sonos can perform much better if installed with proper care
- We live in a world of congested WiFi: use cables wherever possible



HEATING CONTROL

In Our Experience: what's possible & effective

In 2009 water & central heating accounted for 79% of the energy usage of the average UK home. Recent research says that 50% of this usage is controlled by the thermostat which we fiddle with up to 1500 times per year.

Part L regulations and government initiatives in the architectural design stage currently ignore this second fact: we can fit all the ground source heat pumps, Celotex & energy efficient glass we like but control is more than half the battle when it comes to designing an efficient home.

Here at FFD we have been researching & testing heating control systems that can be designed in during rebuild or retro-fitted and they make a massive, on-going difference to both the homeowner's quality of life and energy expenditure.

Some Fundamentals:

- **Ease of use:** the simplest improvement is to make a thermostat more simple to operate, i.e. when you wish to turn down the heating for the weekend it should be a one-touch operation. Equally, to boost the heat in a room should be a twist of a dial and ideally it will then tell you when you can expect to feel the difference (to avoid over & under-shooting). This ease of use should also allow for remote control when outside the home so that energy is only used to heat the home during the periods when it is needed.
- **Zoning:** for best results heating systems should monitor and react to the temperature in each individual room. During the day rooms in a house are used in different patterns and the main bedroom, for instance, could be allowed to drop by 2 or 3 degrees after 9am, whilst the kitchen may need to stay warm. This room-by-room monitoring is of particular value when the control system is coupled with relatively slow-reacting heating surfaces like under-floor systems and optimises the benefits of other energy efficient investments such as ground source heating.
- **Lifestyles:** with the press of a button or the click of a mouse you can switch the control system to "entertaining" mode where it will bring the guest bedrooms up to heat, and then back to "family" mode where rooms that are not in the core family areas are allowed to cool down so that they are damp-protected but are not putting an unnecessary load on the boiler. There can be many lifestyles programmed to the client's requirements in any configuration of rooms so that presets can be activated remotely or within the house to tailor the heating demand to ideal comfort levels in all occupancy scenarios.

Things to bear in mind when evaluating this technology

- retro-fit or rebuild often = wireless or wired
- is the plumbing arranged into zones
- is it a rad-based system that can use digital TRVs
- can the boiler(s) be made to run more efficiently through optimised start/stop
- should compensation be applied to take account of external weather conditions
- will integration to a BMS be needed
- what level of remote operation is required & will it be integrated with a home control system
- what is the return on investment given the cost of the control system versus its potential savings
- are heat pump systems being used
- will HVAC need to be integrated as well



LIGHTING CONTROL

In Our Experience: what's possible & effective

Once upon a time, lighting controls (or intelligent lighting systems) were mainly used for the creation of attractive 'mood' lighting. As such, they had somewhat luxury air to them. However, everything has moved on now, and the technology behind intelligent control has become central to today's energy efficient world: unlike the humble rotary dimmer on the wall a bulb running at 50% brightness on a Lutron system, for instance, will save almost 50% of its energy.

We do not design lighting schemes: we leave the selection of lamps and positions to the client, architect or dedicated lighting designer. However, we specify, install and programme the systems that make them produce not only the required light levels but also to make them flash garden lights in the event of a burglary, or play music at the flip of a switch or shut down the whole house when you turn on the burglar alarm.

Today's lighting control systems produce not just pretty mood lighting but a host of ancillary benefits and we can show you a return on your investment in them within 3 years (on today's energy prices).

Some Fundamentals:

- **Not Necessarily Technical:** we have installed intelligent lighting systems which are operated from standard 'toggle' light-switches. As such when you use the toggle switch it triggers a preset scene and affords all the energy saving benefits, the ability to turn off all the house lights from one place and the security of the alarm integration. And all of this can happen from plates that do not look out of place on 17th century oak panelling.
- **Regulatory Change in Lighting:** as the old tungsten, incandescent lamp is mandated out of existence by the EU we are entering the world of LED and curly Compact Fluorescent replacements. These technologies are much harder to dim than their predecessors but with the use of an intelligent lighting system you can overcome this and be sure to be set-up for any future energy-saving bulb innovations.
- **The Guest Test:** in the past intelligent lighting systems have got a bad name for their inscrutable controls. We believe with lighting, as with all technology, that it should be presented as clearly and intuitively as possible. In other words a guest should be able to come to your house for the first time and be able to use their lights without special instruction. Through the use of toggle switches or carefully engraved plates and by reducing the buttons to a select few (with more sophisticated functions available through double-press features for those who are aware that they are there) we can simplify yet offer enormous control.
- **Retro-Fit:** although there are certain technologies from the likes of Lutron which allow a degree of retro-fitting the full suite of advantages of intelligent lighting systems are only available if it is designed in during re-wiring. It is best to involve a specialist at the earliest planning stages to ensure that you get the key benefits.

Things to bear in mind when evaluating this technology

- Which lighting system to use: Lutron, Dyalite etc
- Is Lutron's Grafik Eye scheme sufficient? Upgrading to Homeworks is often a better economic choice
- Identify clearly the lighting designer for the aesthetic angle
- Who will control and issue the load schedule?
- Patterns of usage in the house are vital to planning an energy efficient scheme
- Careful preparation of schematics is vital due to extra cabling required by DALI, 0-10v etc loads



SUPPORT & MONITORING

In Our Experience: what's possible & effective

We exist to enable people to have a better experience with technology, whether they be our customers, architects or designers. We put great care into the way we communicate and each relationship we make we create for the long term. Our installation during the building project is only the start of our work: we look to support that household for years thereafter because we believe that by enabling people to have a good experience with technology they will be willing to adopt more of it.

Of course technology can be frustrating: it is inherently complicated and sometimes unstable. Almost all of today's household systems contain computers which can crash, 'freeze' or cease to communicate properly. The fact of life is that this will happen whether one has a support relationship with a team of experts or not. Our service will provide a pro-active monitoring programme and a team of clear-speaking support engineers to help with any of these issues. Through our 'digital gardening' we can keep your systems running smoothly and efficiently.

Some Fundamentals:

- **Face to Face:** in the past, unscrupulous suppliers of technology have used the complex nature of their products to cloak their own commercial aims and to sell products to customers which they don't need or in configurations that aren't right. We are called "Face to Face" Digital because we must be able to stand in front of you and justify every product we recommend as being driven by suitability and not commercial return.
- **Price Deflation:** the benefit of today's vastly cheaper technology is that our customers can accept a faster upgrade cycle. If you paid relatively little for a TV, for instance, then it will be more attractive to upgrade for the better features in newer sets in 3 years' time. In giving the right support we can help to identify when there is a compelling reason to upgrade and when it is just marketing hype that should be ignored.
- **Familiarisation:** a pernicious effect of modern technology marketing is the proliferation of 'features' that exist only to try to differentiate products from their competition rather than be truly beneficial for the buyer. However, it is the case that many useful functions of modern equipment go unnoticed after purchase because the consumer is not aware of them. We offer training and familiarisation both after system-install and as needed in the future so that our customers can get the most out of their investments. This extends to one-on-one tuition with all members of the household who may be of use in keeping the system operating properly and at its maximum potential.
- **Room for Growth:** the key to using a specialist for all household systems and involving them in the earliest design phase is that we can create a foundation for easy & cost effective future growth. As clients become aware of the advantages of future technologies, they need a trustworthy support service to ask about it and to implement it for them if needed.

Things to bear in mind when evaluating this technology

- **Trust is vital in recommending technology:** brand independence & a complete overview of the market are necessary
- **You should be assured of a speedy response to your queries**
- **Maximising the potential of your existing investment is important especially as free software updates may have added functionality**
- **All computers will 'fall-over' from time to time so having some support resource is vital**
- **Are the systems you rely on working effectively? When did you last check your back-ups or CCTV recordings?**