

# The house that Bill built

Spencer Dalziel has seen the future – the future according to Microsoft, to be precise. And in this vision there's no room for a toilet. Keep those legs crossed now...



With the smug benefit of hindsight, it's easy to laugh at yesterday's futurologists solemnly declaring that 60 percent of the western population would own a flying car by 1975. As a result, the field of 'guesstimation' is littered with redundant technological concepts that never, well, took off.

That said, even in the murky waters of crystal ball gazing, there will always be an element of certitude – not predicated on the wants of man but on his needs. Surely we'll always need facilities to contend with the immutable laws of being. However high-tech we become in the future, won't we always need a toilet?

I always assumed a certain sense of the axiomatic about the above statement until I was invited on a tour of the Microsoft Home. This interesting concept facility is located in the company's Seattle Redmond campus and models futuristic consumer technology scenarios in a home-like setting.

The idea was initially conceived to ascertain how technology can enhance the consumer experience in five to eight years from now. The development team's remit was to create an environment without showcasing technology for technology's sake – this was to be a question of technological utility for the individual's needs within the home. In other words, the home is about building technology that adapts to people, not people having to adapt to technology.

From outside the building, which Microsoft imaginatively calls 'the entry', you go through the front door. Inside you'll find a kitchen, living room, entertainment room and bedroom. Several key industry journalists – and myself – were hugely impressed with Microsoft's efforts to conjure up a technologically integrated home environment without requiring 'residents' to do anything complex. No one mentioned the toilet. Or lack there of...

## Digital diva

Concept Homes are not a new thing to Microsoft but this incarnation is a direct response to meet the demands of this digital decade. Bill Gates recently outlined the company's vision of a versatile PC ecosystem, whereby businesses and consumers will evolve to encompass a broad range of connected devices and services. Gates even suggested that he expects this trend to accelerate throughout the digital decade as the standalone PC, TV, telephone and associated devices are replaced by a world of interconnected user experiences.

And so it was that a bevy of journalists met Aaron Woodman, program manager of the prototyping team and tour guide extraordinaire. Aaron has been working on the Redmond-based home since its inception and if anyone could explain Microsoft's sanitised approach to house design it was him. Disarmed of recording paraphernalia, we approached the home in tones of hushed reverence.



## Scenario one Home sweet home

After a hard day at work, Dad (or, in this case, Aaron) walks up the driveway towards his house. The Microsoft Home uses RFID (radio frequency identification) tags on several of his personal items such as his clothing, watch, glasses, mobile phone, PDA or briefcase to let the house know he's approaching the front door. The Home does a quick check and assumes that if enough personal devices are present to verify Aaron's identity it can unlock the door automatically for him. If Aaron doesn't have enough RFID tags on his person, the Home asks him to verify his identity using an iris scanner. This allows for a very secure identification system. The end result? Aaron walks to the front door and it's unlocked – no fumbling with keys or alarm systems... Or that's the theory.

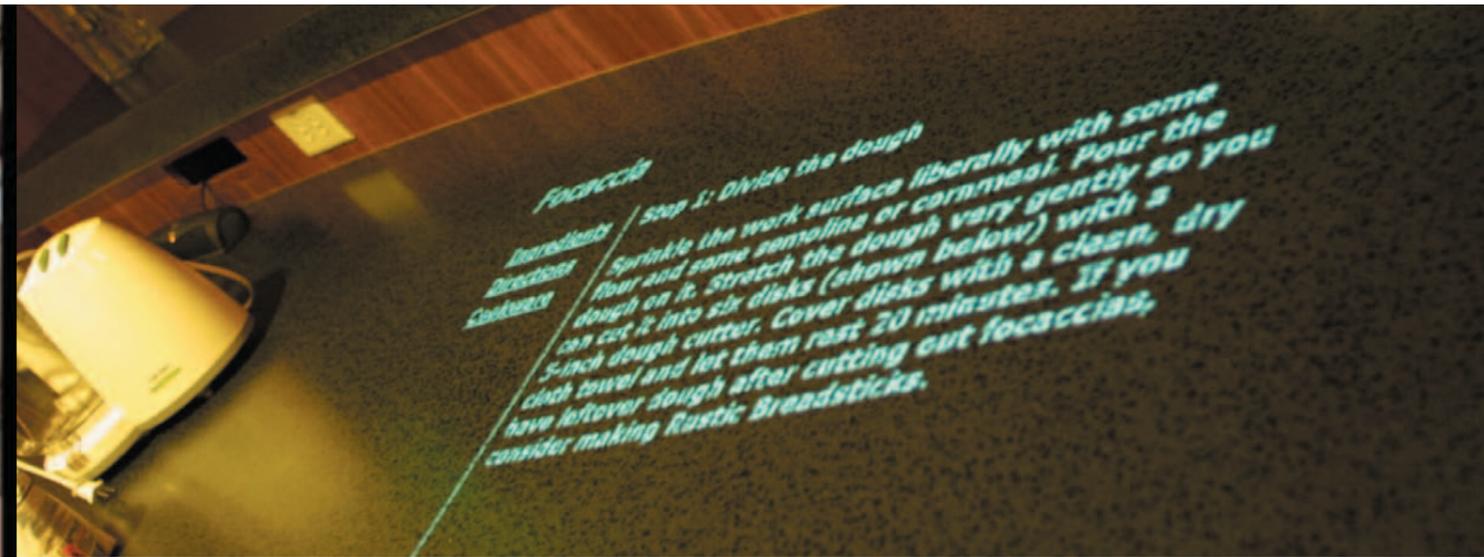
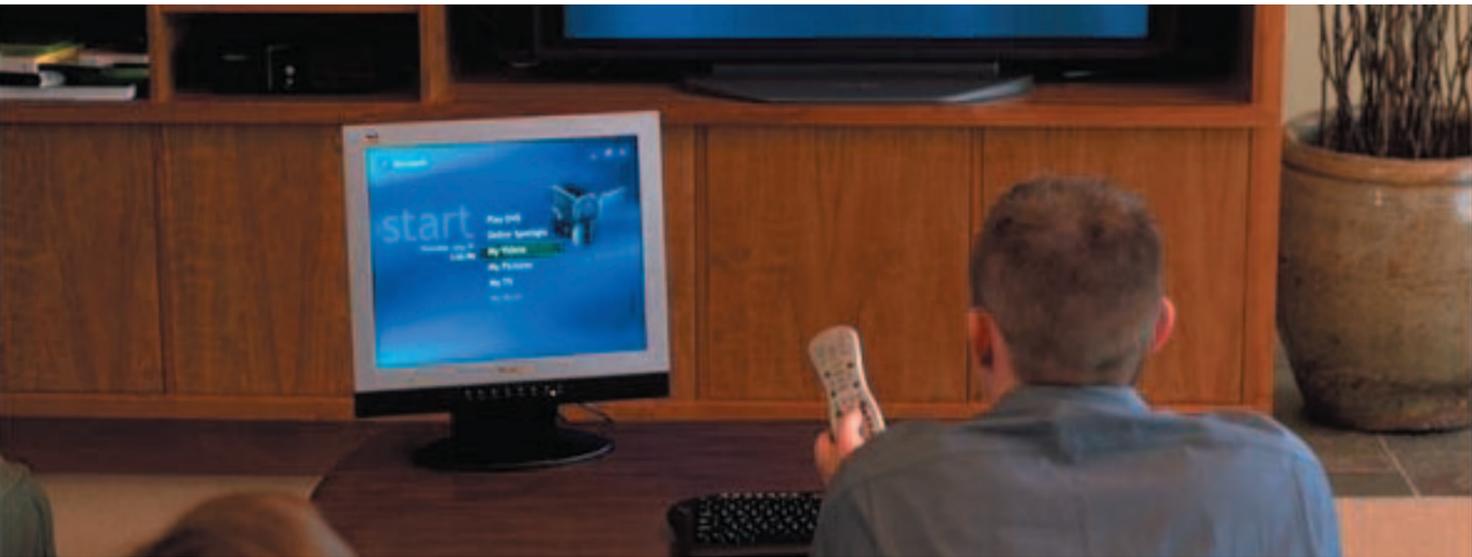
Demos rarely run smoothly and it takes three attempts for Aaron to get through the front door's biometrics devices. Now biometrics isn't new technology but, as Aaron sensibly parried, it has yet to be fully adopted. We should therefore view the Home's biometric setup as a prototype for the purposes of the house experiment. Undeniably true, but it's also extremely important to take your glasses off when you're iris scanning.

## Ou est l'iLoo?

Microsoft has quite a history with enigmatic toilets. Back in May 03 there was a press-driven debacle over the company's supposed research and development into the iLoo, a prototype Wi-Fi toilet. It was eventually discovered that the iLoo actually existed – conceptually at least. But it was always meant to be a one-off pilot, not a major manufacturing project.

Surely other Microsoft departments would be cross-referencing such material for collaborative research and Aaron's team would be well aware of the work on the iLoo? Surely, in a home where every room has been conceived with near-future technology in mind, there's a place for the toilet. After all, the Microsoft Home's kitchen can monitor an individual's diet and analyse what's required to ensure you're living a balanced lifestyle. Microsoft might be able to apply this theory backwards. If we can assess what's going into you for the purposes of providing a healthy diet, can't we analyse what's coming out?

Of course it's possible but sadly, as Aaron eventually tells me, the concept is blighted by the childish whim within us all to laugh at such matters. Yes, it's toilet humour. In his very words: "We are constantly looking at new spaces where technology has a huge opportunity to play a role, but we try to avoid the 'snicker factor'. We want people to think hard about the technology and make the home something that is comfortable for everyone."



**Who's in charge?**

There's a major problem with unified software architecture driving the Home's technology and a single remote control: who gets the final say in the home. Microsoft judiciously sidesteps the issue of family politics. Ultimately it's up to the authority figure in the family to decide what's appropriate.

However, Aaron explains further: "Yes, the remote control does play a large role. But it becomes less of an issue because it is not the only thing that can control the Home.

"We try to stay away from creating technologies that are solely controlled by the remote because it can be too limiting. We are constantly thinking outside the box - having a light switch that controls the TV and so on.

"Access is something that people get to decide, so depending on the choice of the family members it is a totally open system that lets people decide who has control."

Microsoft Home's living room sees the concept of Windows XP Media Center PC being expanded

**Scenario two** Are you sitting comfortably?

There is so much content now available to us on the internet it is becoming much harder to find relevant information online. The Microsoft Home aims to overcome this problem by allowing individuals to share interesting information across groups of friends. A teenager can, for example, access his 'best friends' group and see the most popular songs that his mates are listening to or even catch a live internet radio station that others in the group are tuned in to. This makes experiencing entertainment with friends and family lively and more fun.

We had the fortune of seeing this scenario played out in the living room via a widescreen plasma TV hooked up to an integrated multimedia PC. There's no doubt that Microsoft's attempt to unify the residents' interaction with technology works well. Navigating the displayed content with a remote control, Aaron demonstrated the living room as the central hub for the family's interaction with each other.

Sounds familiar? It should do. As you've probably guessed, this concept began life as the Windows XP Media Center PC. Aaron glances over, licks his index finger and strokes the air in a downward direction with self-satisfied exuberance. Prototyping team: one; Spencer Dalziel: nil.

**Scenario three** Microsoft's kitchen

Leveraging smart and connected technology, the Home can recognise that Mum has placed items - say flour and a mixer - on the kitchen counter and will ask her if she would like some help. If she says yes, the Home will activate a ceiling projector that displays text on the countertop with several options including mixer instructions and recipe ideas. It even actively customises the recipe choices for Mum. So because it's 17.30 the Home assumes she will want to cook dinner for the kids. It also knows that there's a dinner party planned for that evening, so it pulls recipes for eight people from the internet.

When Mum (being wonderfully played for the day by an accommodating Aaron) tries to cook in the kitchen, the Home's technology springs to life. A barcode on the food's label is scanned and speech-recognition software picks up Aaron's commands. The scanning presented no problem but decent speech recognition is still in its infancy. It wasn't too surprising, then, to

hear Aaron adopt the 'English tourist on holiday' approach. When not correctly understood, shout loudly and slowly in a clear voice in the hope that Johnny Foreigner gets it. Somehow it worked. Despite this mishap, it's the kitchen's technology that truly encompasses Microsoft's vision of a future home - at least in terms of design - because it's discreet and doesn't interfere with the natural layout of the room.

That said, the software is making calculations based on a set of assumptions about the behaviour of Mum, her interactions with the known objects in the kitchen and the time of day. Consequently, there's room for a wide margin of error. How easy would it be for Mum to end up with a list of ingredients for making bombs rather than boeuf bourguignon for eight? No one likes a faux pas at a dinner party.

**Scenario four** That's entertainment

Mum sits down and starts to read a story to one of her children. The Microsoft Home quickly asks her if she would like to enhance the tale. She says yes and the Home creates visuals, changes the lighting and plays relevant sound snippets, helping to create a more enjoyable storytelling experience. The entertainment room can change the lights to be interactive (flash or change colours) based upon what is happening in the room such as playing music or a game or watching a movie.

There are some great ideas in this room but Aaron repeats the scenario with a Bob Marley album. While the music's unquestionably good, the overall effect is somewhat neutered by the impression that they could have saved a fortune by hiring out a 1970s mobile disco extravaganza instead. This suggestion did not meet Aaron's approval.

**Question time**

As the tour nears its end, the assembled journalists get a chance to fire questions at the Prototype Team and everyone wants to know specific details about the technology on display. But here we meet a wall of silence bar the generic company response: "The technologies in the Home are all prototypes that are not currently shipping or in the market place and will be available in the next five to 10 years."

One hapless journalist presses the enquiry further and Aaron humourously tells him that he could tell us but he'd have to kill us. As a statement backed

Don't worry if you're not the next Jamie Oliver. The Microsoft Home projects recipes on to the countertop

up by the might of Microsoft, I decided to take this on face value and asked no more. Just to be safe.

As we were packed off with a goody bag containing a free oversized T-shirt emblazoned with a Microsoft logo and yet another pen, I mused on the day's events. Despite trouble with interactive demonstrations, no toilet and obvious teething problems with integrated technology, the Home is a success.

There's no doubt some of the technologies will reach the market and some, like the flying car, will be scrapped or postponed 'til further notice. Either way, if it wasn't for people like Aaron at the forefront of futuristic research I'd still be rolling around in some antediluvian mire, waving a rock above my head and conversing with passing strangers with cries of "Ug". As would we all. God bless the dreamers. God bless Aaron. ☒

