ABSTRACT
This paper will explore the links between ICT infrastructures and social communities at a regional scale. We argue that there is a need to move beyond the technologically deterministic rhetoric of the ‘digital city’ and to consider the subtle changes occurring in the ways that people live their lives in everyday spaces as a result of ICT changes. This paper will address how such ICT infrastructures, and in particular broadband internet access, have become localized within a community; and the broader impacts this may have on social inclusion and sense of place within a neighbourhood setting. We introduce a model for understanding these changes through looking at the links between access to public spaces for ICT use and levels of social inclusion in the context of a neighbourhood setting. We contextualize the study of the interplay between the invisible networks and material world of regional urban and rural life through a case study of internet use in a regional town in South-West UK.

Author Keywords
Neighbourhoods, networks, social inclusion, place, ICT.

ACM Classification Keywords
K.4 Computers and Society

General Terms
Human Factors; Design; Measurement.

INTRODUCTION
There has been a great deal of research on the effects of digital media and ICTs on the urban condition. Similarly the impacts on social and community based structures and networks of the use of new forms of communication and interaction through technology have been studied from a range of perspectives, but with very little critique of the complex urban nature of such media. Yet ICTs and new modes of remote communication are having, and have had, significant effects on communities that are not cutting edge urban settings but rather at regional and rural scales. These settings have different structures and patterns of inhabitation than those of highly urbanised city centres and therefore corresponding different relationships with social and economic issues.

The diminishing significance of space has been asserted by Castells (1998), who claims that the set of global network relations shaped by ICT flows dominates over the ‘space of places’. Putnam (2000) writes of a decline in social capital, describing how interactions with one’s social connections are increasingly being enacted behind closed doors within private spaces. Lofland (1998), too, laments the loss of time spent within the public and parochial realms, as modern technologies have allowed for yet more activities to be carried out solo from the comfort of one’s own home. Hampton has offered an alternative hypothesis: “new ICTs may not create a ‘space of flows’ that is separate from the ‘space of places’. ICTs may be increasingly embedded into all aspects of everyday life and existing spheres of interaction. In the case of neighborhoods, the integration of ICTs into everyday life could reverse the trend of privatization within the parochial realm” (2007: 715-716).

The focus of this paper will be on how to qualify and evaluate the effects of digital networks and interactions on place-based social structures such as neighbourhoods in regional and rural settings. It will explore the characteristics of place-based communities and the interplay between the invisible networks and material world of regional life. The final section of the paper will discuss some early qualitative findings from a case study in a regional town neighbourhood in South West UK. The empirical work looks at the effects of internet access on local people and how it impacted on both their sense of place and the degree to which they felt socially included in their neighbourhood setting.

NEIGHBOURHOODS
It is difficult to find consensus as to what constitutes a neighbourhood. The debates within the social sciences deriving from work by those such as Bell and Newby (1971) and Crow and Allen (1994) highlight the complexities of not only defining but also studying what
Therefore for a socially sustainable neighbourhood to flourish, understanding the conditions for enabling socially inclusive communities together with ones that can promote a strong sense of place are vital to the future of the neighbourhood. In order to investigate this condition we propose a model of the relationships between mediated social networks and public space in a neighbourhood which looks at the relationship between sense of belonging (place) and social cohesion.

CASE STUDY

Setting
Liskeard is a medium-sized town that acts as a local centre for rural surrounding areas (see Figure 1). Liskeard town has a population of about 9,000 people spread across two town neighbourhood areas, North and South. The town centre neighbourhood has an IMD (Index of Multiple Deprivation) rating of 6,230 (out of 32,000), putting it in the bottom twenty per cent of the most deprived areas in the UK. There are a number of public and semi-public spaces in the town centre which provide internet access to the public. These include the central public library, a community centre (Liskerrett Community Centre) and the church community centre (St Martin’s). In this regional town, there are no cafés or other social spaces that offer WiFi.

Method
The study partnered with a charity, Citizens Online, that runs training for people going online in order to tackle digital exclusion. This involved eight-week taught courses for small groups of local people enabling them to gain basic computer skills and access the internet. In Liskeard a series of courses were run in autumn 2012 and spring 2013 at the central library (see Figure 2).

ICTs and Neighbourhood Connections

Despite the ubiquity of the dis-embedding and de-territorialisation claims, local identifications, place-based communities and attachment to place have remained salient (Pahl 2005; Savage et al. 2005). Social networks use multiple media, linking online and offline worlds of multiple origins through different technologies at varying scales. And yet the study of new ICTs has maintained the frame of neighbourhood as either online or offline. Online relationships have tended to be recognized and studied as entities in themselves, isolated from existing social networks and existing means of communication. Yet, mediated social networks need not be global and disconnected from local spaces but according to Crang et al. are instead “multiply (sic) emplaced; such that they may sustain neighbourhoods rather than oppose them” (2007: 2411). Hampton’s study of a wired neighbourhood found that where people used multiple methods of communication: direct in-person contact, telephone, postal mail, and more recently fax, email, chats, and email discussion groups both locally and globally the consequence was that “wired residents neighbored much more extensively and intensively than their non-wired counterparts” (2002: 228). Therefore presence and use of media in a neighbourhood offer a new type of localised sociality that occurs at different temporal and spatial scales simultaneously (Hampton 2002). Crang found that “more marginalised neighbourhoods tend to be characterised by instrumental and episodic ICT usage patterns which are often collectively organised through strong neighbourhood ties…. It is those neighbourhood ties that enable on-line access” (2006: 2405). Regional, deprived neighbourhoods that typically have a high level of social capital operate very differently from highly urbanised and economically thriving settings. The conditions that often characterise marginalised regional communities: lack of social mobility, lack of access to good housing and geographical isolation provide the conditions for internet access to be supported through existing neighbourhood ties. According to Forrest and Kearns communities that lack social cohesion have “low levels of social interaction between and within communities and low levels of place attachment” (2001: 2128). Therefore for a socially sustainable neighbourhood to constitutes neighbourhoods and untangling this from concepts of community. Theorists of neighbourhood generally agree that they are both spatial and social spaces. Traditionally, one of the key concepts of neighbourhood is proximity in a topographical sense, but a neighbourhood is actually a far more differentiated social framework that does not simply relate to a physical setting. Galster defines them as “bundles of spatially-based attributes” (2001: 2112) and Massey (1994) has pointed out that neighbourhoods cannot be regarded as containers in which social interactions take place, but rather as trajectories and intertwining social networks.

Figure 2. Map of Liskeard showing location of library at the centre of the town (© OpenStreetMap contributors).
Participants
Twenty-eight people were shadowed for the duration of the course and were interviewed for approximately twenty minutes each. Participants were all local people, typically over fifty years old, who had had limited or no previous experience of the internet. Most did not own a computer, and some had never used a computer or the internet before. These participants were either retired or out of work, and thus did not typically travel to work. These people fit within the very bottom end of the ‘basic’ level of digital engagement (DCMS 2008).

LINKING PUBLIC SPACES AND SOCIAL NETWORKS

Social Inclusion
At the introductory session the subject of what they knew was discussed and a typical answer was: “I don't even know what Google is” or “I just want to know how to get out of trouble. I’m scared it (the computer) will blow up on me”. The main reason for going online was for almost all the participants motivated by the need to simply ‘gain general computer skills’. But contributing issues were pressure from family, health issues (resulting in lack of mobility), and the need to keep in contact with family and friends. For example one participant commented: “I'm getting fed up with all the family saying “When are you going to go online?”” But generally most participants reported that they somehow felt ‘excluded’ or left out by their lack of ability to access the internet. For example one participant explained that her reason for wanting to access the internet was “because I felt I wasn’t getting connected with everything that’s going on” (Mary).

There were a number of participants on the course who were literally quite socially isolated. They lived alone and had no close family living locally to help them gain basic internet skills. However there were also some participants who had close family and friends either living with them or close by, but who found it difficult to get the support they needed. A number of participants talked about the problems of always ‘relying’ on younger members of the family, and even that they wanted to avoid arguments with their partners around computer skills. A typical answer was I just want to be able to “surf the net without bothering junior family members” (Bridget). This suggested that for a person to maintain a sense of connection in their local community they wanted to do this on their own terms, and still be an individual in their own right, without depending on others. Their sense of being included relied on them being valued on their own terms and not as a ‘less-able’ person. Once they had gained the basic skills they felt more able to participate in a range of social activities.

For other participants they found that the weak ties of local social networks they associated with became weakened further by the fact that key socialising activities were increasingly conducted through email or social networking. One participant described how she was motivated to go online since the local Badminton Club, of which she had been a member for a number of years, had started to organise activities via email. As a consequence she explained that “I used to have to wait for a phone call, but now I log on every day to not miss anything from the secretary of the club” (Linda). Interestingly it was at this point that the internet access was seen as a remedy to the problem of social isolation. Going online corresponded with many of the participants feeling less socially excluded in their neighbourhood. If a neighbourhood is defined by close social proximity, then, for the most ‘digitally excluded’ groups, the social contact associated with gaining internet skills resulted in a re-localising of community connections.

Sense of Place
Most of the participants had lived in either the same house in the neighbourhood or the local area for over twenty years, some of them over forty years, and could therefore be considered as locals (though they did not necessarily describe themselves in this way). When asked, participants described their perception of their neighbourhood as a fixed and stable place that had geographic qualities (usually centred around their own home), but was often characterised by social connections. Many described how, despite them not moving, they were aware of how the neighbourhood had changed. For example, one participant talked about how “we moved here in 1968, and one time we used to know everyone, but the neighbours have changed since we first moved and now we are the old stalwarts” (Tessa). This change in the nature of neighbourliness might be linked to broader societal issues around mobility and society. For instance in the UK, 60% of the population in the 1950s believed that other people could generally ‘be trusted’. In the early 1980s the figure stood at 44%, and in the twenty first century this had fallen to 29% (Halpern et al. 2002). Many of the participants in the study had a strong sense of association with the place, but the length of time they had lived there actually made them more aware of the transience of the neighbourhood as a social space, and correspondingly they felt less connected. This was compounded for some by isolating factors, such as serious health issues or life-changing situations such as the death of a partner. The sense of the vulnerability of either the neighbourhood, or their role within the neighbourhood, to social change caused their sense of belonging to come into question.

As a context to this, the actual location of the course in the central library was linked strongly with a place that participants trusted and where they went to ‘for information’. In fact for many the library was seen as a form of internet; Margaret described how “I know the library. I haven’t got a computer at home and if I need to know something it helps. I know all the staff. I asked about getting some information and the staff helped me.” According to Wikipedia a library is a “place that provides a collection of information resources made accessible to a
defined community”. In the regional town context of Liskeard it is the main public location where people can freely access information, and consequently it plays a distinctive role in the life of the neighbourhood. It is also the most recognised public space where a local person can access the internet for free. Beyond the more private space of the home, access to public places such as libraries provide everyday opportunities for social interaction and social inclusion, and can facilitate the development of community ties. Doering claims that if small-scale activities, “which lead to a feeling of belonging and an affective connection with place- or non-place-based social groups” (Doering 2008: 8) can be enhanced by digital technologies this can facilitate their uptake and prohibit a deepening of the digital divide. In the context of a study of the link between social inclusion and neighbourhood place with the focus on internet access, the library is an example of the type of place that provides the conditions for all these activities to take place.

SUMMARY
In this paper we presented a framework exploring the link between sense of place and social inclusion as a way of trying to understand the changes occurring due to the introduction of broadband internet access in a regional neighbourhood. In our case study of a regional town in South West UK we showed that people’s degree of inclusion within the neighbourhood was actually undermined by the increasing use of media within their social networks. As aspects of communication became mediated through social media they struggled to maintain their social status and only through going online or gaining digital skills did they reinstate their role in a local group. This shows how media in this case did in fact de-localise community activities by taking them into online networks, and that in order to remediate the link between social networks and local places the participants had to gain new media skills. But it also reminds us that not only do we need to recognize that neighbourhoods are transient and shifting settings, but also that we need to de-romanticize ideas of locality and tight knit social spaces as being the reality of neighbourhood life. In the study key public places such as the central library allowed for a ‘social glue’ (Martin 2008) to reconnect with some aspects of community life.

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