

# Senior Social Platform – An application aimed to reduce the social and digital isolation of seniors

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## 1 ABSTRACT

European society is aging; trends such as social isolation and health issues are on the rise as aging citizens become less mobile and the social interactions associated with work, family and friends weaken. Loneliness and social isolation among senior citizens can be as harmful to their health as smoking or a sedentary lifestyle. Just as the demographic makeup of society is changing, the manner in which citizens interact with each other has also changed dramatically in recent years. The Internet, Email and Web 2.0 social media have led to a migration of social interaction from physical to virtual communities. Yet, a mere seven percent of seniors participate in social networks. The Senior Social Platform (SSP) aims to use social networking applications to help reduce social isolation and loneliness among seniors and promote participation in today's increasingly virtual society.

## 2 STATE-OF-THE-ART

### 2.1 Social networks – defined

Social networks are essentially fora where people who share common interests come together to form a community. Traditional social networks include academic organizations, career associations, interest groups, etc. Interaction with peers in such social networks generally involves face-to-face meetings. Today, however, like many other activities, social networks have migrated to the Web. Dominant Web-based social networks include Facebook and MySpace, however, a multitude of other social networks also exist. A key attraction of such social networks is the ability to obtain information about members without actually contacting or “meeting” them. In addition, online social networks provide a variety of other functionality including video and audio file sharing that make them attractive to many individuals. [1]

### 2.2 Internet and Social Network usage

About six out of 10 West Europeans regularly use the Internet. Recently – for the first time - the amount of time young people spend online exceeds time spent watching TV. [2] In 2006, Austria had 4,6 million Internet users and a broadband penetration rate of 61,8% which places it slightly higher than the EU average in terms of Internet usage. Although earlier Internet growth was driven by tech-savvy young people, more recently, an increasing number of senior citizens have been flocking to the Web. In fact, according to Senior Journal, “the fastest growth in Internet use is being driven by the older age groups, starting at 55.”[3][4]

Previously the Web was about Email, instant messaging and blogging, in other words, communicating with the rest of the world on a large scale. Today in the era of Web 2.0, it is about becoming social and the Web's killer apps focus on connecting us and our online activities with our friends – real and virtual. [5] Thus social networks are becoming a key driver of Internet usage growth with 42 percent of Internet users active in social networks. [6]

As mentioned above, senior citizens are at the forefront of today's Web growth. However, relatively few seniors are involved in Web 2.0 social networks despite the many potential benefits for this age group. Whereas among young adults (age 18-24), 75 percent use social networks, usage levels by adults over 65 are still a mere 7 percent. [6] The main reason for this has been the lack of a social network platform that meets the needs of seniors in terms of usability.

This is changing. Social networks are expanding and diversifying. While MySpace (50%) and Facebook (22%) continue to be by far the most frequented by social network users, an increasing number of niche networks are also springing up. [7] These niche networks include a number which focus solely on older age groups – the so-called baby-boomers or empty-nesters. These age groups have both numbers and significant purchasing power (over \$2 trillion) - an attractive combination that is feeding this new trend. [8] Some older people are joining Facebook to keep up with children and grandchildren. In fact, Facebook and MySpace have gone to great lengths to make their sites more accessible to senior citizens, as well as giving them more features specifically designed to an older demographic. [9] The strategy seems to be paying off. The Nielsen report reveals that from December 2007 to December 2008, Facebook added more than 13.6 million users

aged between 50 and 64, which is about twice the number of added users under 18 years old. [10] Seniors frequenting the new niche senior social networks perform activities ranging from exchanging photos, chatting and playing brain games to online dating and seeking advice on various topics. Some of the new senior-oriented (niche) social networks include:

- eons. A popular social network for Baby Boomers, eons offers ways to connect with others as well as brain games, blogs, videos, and photos.
- Rezoom. Offers articles on music, activities, going green, money, and more. Also allows users to find a friend, read blogs, or visit one of the city-specific sites.
- Multiply. While not just for older users, this site does have a large number of senior members. The features here include blogs, a social calendar, movie and restaurant reviews, and photo sharing.
- Seniorocity. Only for adults over 40, this network offers plenty of ways to connect with others including blogs, chat rooms, groups, and photo galleries.
- Maya's Mom. Specifically for parents, this site is known to have lots of older members. Connect with other parents in groups, by sharing photos, and more.
- BOOMj. This social networking site offers the opportunity to connect with friends and colleagues, shopping, photo and video sharing, and much more.
- Boomertowne. Users can create a profile and join in with discussion groups, movie reviews, recipes, and more. Boomertowne also features a singles dating service.
- EldersVoice. This site is a "social networking site for senior citizens who are young at heart." Users can post photos, video chat, play games, or post on their personal blog.
- TeeBeeDee. For anyone over 40, this site emphasizes sharing experiences and knowledge. Topics range from travel to food to sex to spirituality.
- BoomerGirl. Targeting Baby Boomer women this site is part social network and part eZine.
- Eldr. Users can participate in the forums or start blogging to connect with others. Don't forget to take advantage of the great articles ranging from travel to the environment to exercise.
- Secondprime. For the 50+ set, this community includes the usual forums and such as well as volunteer activities, a social calendar, and more.
- Growingolder. The concept of this site is to create an intergenerational community around news that is inspiring, amusing, and uplifting. While most content is specifically directed at those over 50, the site welcomes members of any age.
- RedwoodAge. This site has a definite social-change aspect to it with topics such as the environment, poverty, and the state of health care right along side articles about health, exercise, and travel. Users can visit the Village to connect with others.
- eGenerations. Their tagline explains that they are "a worldwide community of experienced adults" and the home page shows there are members from 62 countries and ranging in age from 30 to 101.
- Boomer-Living.com. Users can join the Coffeehouse at this site to find their social network where you can meet others, play trivia, and more.
- LifeTwo. "Midlife improved" is how this site is described. Users can follow their online buddies with a free membership or just read the blogs and articles available.
- My Boomer Place. Users can create a profile and get started connecting with friends or making new ones, sharing photos, writing and sharing articles, playing games, etc.
- Maple and Leek. For those 50+, this community is one of adventure and entrepreneurial spirit. Users can connect with like-minded seniors.
- InteractWell, a site specifically designed for senior citizens. Not only is it a place for seniors to come together and interact, but a place for them to share their views regarding life experiences, all across the globe.

- GrownUps. A site out of New Zealand, this social network for those over 50 provides information on health, money, games, and more as well as an extensive listing of various online groups and organizations users can join. [11-13]
- Finerday. A commercial site, supported by Age Concern, it enables older people to stay in touch with their families and vice versa. The website allows the whole family to connect, share photos, special dates and memories. It has been designed in a simple way with the intention of making it easy to use for senior citizens who may not have used a computer before.
- Saga Zone. This is an online social community, based in the UK, targeted at the over 50's.
- The Peggy service was developed as a means of connecting older people with their younger relatives using social networking, in a way that is convenient for them. The Peggy function on Facebook allows members of the site to send a postcard from Facebook telling someone they are thinking of them. The function allows an individual to type their postcard on Facebook, the company will then print this out and send it. [14]
- thetimesofmylife.com - a site that enables older people (and others) to post their memories – in text, audio or video – to be shared and preserved for posterity.
- Information Now15 - This is not a social networking site but it is a website which was designed to address the needs of older people in Newcastle. The site was created in conjunction with older people to provide information for older people, their families and carers, about services available in the local area.
- Seniorkom – [www.seniorkom.at](http://www.seniorkom.at) – This Web page offers senior citizens a comprehensive selection of services and information as well as Chat possibilities for registered users
- Genkvetch, in honor of the generation that "kvetches," a Yiddish word meaning complains, whines or nags. The site, open to people of all faiths, accepts no advertisements. [15]
- ELDY (<http://www.eldy.eu/de/>) – simple Windows interface tailored to seniors, includes 6 areas (print, mail, etc.)
- <http://jive.benarent.co.uk> - jive is a range of devices that help seniors keep up to date and stay in touch with their loved ones. The devices were designed to help technophobes interact virtually.
- <http://www.boomeryearbook.com/> - Easy to use social website geared to seniors.

The majority of these senior-oriented social networks are located in the U.S. However, social networking is hardly just a U.S. trend. It is popular in Europe and Facebook and MySpace are dominant players here as well. Nevertheless, the European social network market is more fragmented - often by country or language region. Dominant social network sites in German speaking areas of Europe include:

- hi5.com
- Netlog.com
- StudiVZ.net

## 2.3 User Interfaces

Probably the single most significant deterrent to widespread adoption of any form of ICT by seniors is their general unfamiliarity with such technologies and the user interface for managing them. This is especially true in the case of social networks. Services available and appropriate for older people are often inadequate. Unlike their younger counterparts, the physical and mental states of seniors limit their ability to make full use of social network functionality. Indeed, “the designs of most social network websites are poorly suitable for the elderly.”

It is particularly challenging to develop a user interface for user groups that have little experience in using the technologies in question. To this end, researchers are currently examining the potential for existing technologies familiar to seniors to act as an interface to ICT and the applications that run on them. For many elderly, the television and the telephone are their main form of company and the most commonly used consumer devices in the household. Especially in light of the digital switchover for TV and the ubiquity of mobile phones, these two devices offer considerable potential as a means of interfacing with the Internet and,

ultimately, with social applications. WebTV is nothing new; it has been around for over a decade. However, researchers are currently examining how the TV and its remote can become an interactive device for seniors by augmenting it with Web connectivity. It is perfectly feasible for an older person to use their television to browse the net, access social networks, information about their health, or activities in their local area. There seems to be a smaller jump from watching a television, which older people are already familiar with, to getting online. Furthermore, there may be a role for the television here, specifically with the proposed digital switch over taking place by 2012.

Other interfaces are also under development. A recently launched communication device called Jive aims at getting elderly technophobes connected to friends and family by making the process of getting online and navigating a social network easier for seniors. [16] However, probably the most significant new forms of interfacing with ICT are coming from the gaming industry “where Joysticks and push-button controllers seem to be on their way out, replaced by simpler, more intuitive devices -- similar to Nintendo's Wii -- that let gamers move their arms and legs to guide their avatars' movements onscreen.” Nintendo even has come out with a new device called the Wii Vitality Sensor, which is intended to help players visualize and control their pulses – a device with obvious potential for the eHomecare industry.

### 3 SOCIAL NETWORKS AND SENIORS

“Loneliness is a situation experienced by the individual as one where there is an unpleasant or inadmissible lack of (quality of) certain relationships. This includes situations, in which the number of existing relationships is smaller than is considered desirable or admissible, as well as situations where the intimacy one wishes for has not been realized.” Loneliness often goes hand-in-hand with social isolation. Living in a society where there are massive inequalities has led to many people feeling excluded. A 2003 ESRC report defines social exclusion among seniors as, “the elderly missing out on material needs, social relations, civic activities or basic services”. [17] There is a strong connection between social exclusion and digital exclusion. A Citizen’s Online report from July 2007 revealed that 75% of people who are socially excluded are also digitally excluded. The growing virtualization of society and social contacts will exacerbate the situation and lead to further social isolation of the elderly.

Researchers have found that the health effects of loneliness are similar to those of a sedentary lifestyle or even smoking. These effects include a variety of ailments ranging from depression to Alzheimer’s. The costs of treating these ailments are a burden on society which will increase as the number of elderly increase due to demographic trends in Europe. By 2050, 25% of the EU’s population will be over 60.

Social contact can actually be a means of preventing such ailments. For example, researchers at the Rush University Medical Center in Chicago have found that social contact offers a protective effect against the damaging impacts of Alzheimer’s disease. They found that the greater the social network size of seniors suffering Alzheimer’s, the more protective effect on cognitive ability occurred. In other words, “social network size appears to have offered a protective reserve capacity despite the fact that their brains had the tangles and plaques indicative of Alzheimer’s disease.”

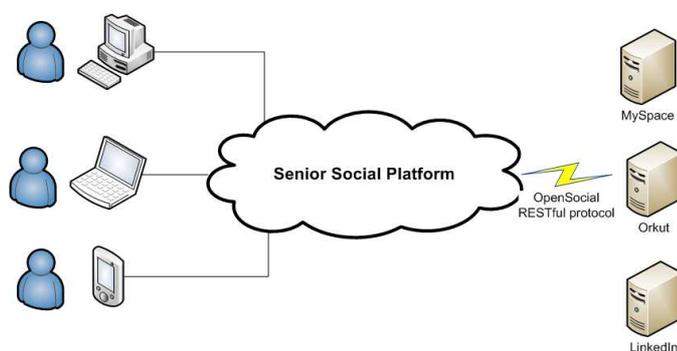
While this research focused on social networks in the physical world, there seems to be strength in the argument that virtual social networks could also be of benefit for lonely older people. Furthermore, Metcalfe’s Law clearly states the value of any network is proportional to the number of connected users. Therefore, the value for any older person using a social network depends on the number of other older people using the same network.

Politicians, policy makers and citizen activists also are turning to social networking sites as a means to reach new audiences. Especially in the U.S., social networks are playing a key role in political campaigns. Some advocacy groups have created their own Apps on social networks, while others are using ones created by vendors that plug into member-management systems. On Facebook, for example, users can create “Causes,” while groups can create “Fan Pages.” [18] The social exclusion of seniors stemming from their limited use of social networks will eventually lead to political exclusion despite their growing numbers as a demographic group. [19]

## 4 THE SENIOR SOCIAL PLATFORM

This project is supported through a grant from the Internet Foundation Austria (IPA). The Senior Social Platform (SSP) project aims to use OpenSocial - a set of common APIs launched by Google and supported by many other social networking sites - to create a user-friendly interface to social networking sites which focuses on senior citizens and their needs. By involving seniors in social networks, the project aims to reduce the social and digital isolation of this age group while simultaneously providing a valuable tool for family, caregivers, and social services to meet the needs of a large and growing demographic group.

The OpenSocial recommendation standardizes basic elements for social network profiles such as property fields (name, DOB, friend lists, etc.) and media lists including photos, videos or music. OpenSocial is basically an API that provides a container that makes it possible for social network applications (also called widgets) to run on multiple sites without modification to the code. A major component of this project is connecting the SSP to existing social networks, which the platform will gather information from. The social networks which support OpenSocial, usually provide a RESTful interface, which makes it possible to retrieve necessary information from each social network. Using such an interface, we can integrate multiple sites into our SSP.



The SSP will be a Web application, e.g. written in Java, and will run on an Open Source application server, such as Apache Tomcat. It will have a database engine to store access tokens and settings of the different users. This could be IBM's free DB2 ExpressC, MySQL, or PostgreSQL. Communication will occur over a RESTful protocol either directly between the server and the social network site, or between the user's browser and the social network site with the help of JavaScript and the powerful JQuery framework, using JSON as data format.

Security is also an important. The RESTful APIs usually authenticate with OAuth, which is one of the most secure solutions available. The user will only have to enter his credentials once for example on a preferred social network. Our platform will only receive a dedicated access token, which can be used to access the user's profile on the given social network and can be revoked any time the user would like to deny access for our platform.

Currently, the SSP is still under development. The initiative has a project Web page (<http://sites.google.com/a/ceit.at/ssp/>) where progress can be followed.

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