Dear ASDtech members,

This month's digest contains information about:

1. Novel examples of apps to support people with autism, including guidance for practitioners and family members, tips for anyone wanting to develop an app, and nominations for a UK Digital Media award
2. News about how technology industries may be helping to improve employment opportunities for people with autism
3. A couple of podcasts by researchers about how technology is being used to support clinically-relevant research
4. Information about how recycling old mobile phones can help children with autism in the UK get an iPad
5. Information from the 2012 AWARE event (Autism Software: How to get it out there) include videos of presentations and discussion panels
6. UK training dates for Secret Agent Society facilitators
7. Recent publications relevant to autism and technology
8. Frontiers in Human Neuroscience call for papers for a special issue on Advances in Virtual Agents and Affective Computing for the Understanding and Remediation of Social Cognitive Disorders.

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1. Novel examples of apps to support people with autism, including guidance for practitioners and family members

   and tips for anyone wanting to develop an app

This designer has created some bespoke cooking tools and an accompanying iPad app, inspired by her brother, specifically to help adults with autism cook for themselves.

This app developer, Smarty Ears, has a whole suite of apps specifically designed for children with autism - Language Empires and Social Quest are recommended by autism researcher Maria Diez-Juan.

For parents and practitioners, you might be interested to read this blog post with information about how to change the settings on your iPad or iPhone to make it more child-safe.

This speech and language therapist in the USA has created lists of recommended apps for families and practitioners, free to download from her website.

Here's an example from the news about how app developers and education institutions can work together to create bespoke technology-based supports for their service users.

The App Quality Alliance (AQuA), the mobile industry’s independent association for QA, has analyzed years of data on why apps fail to develop a range of free tools to help developers improve app quality. In this post, AQuA’s Executive Director Martin Wrigley identifies the top reasons apps fail, and describes some of the free tools available to help developers avoid common pitfalls and stand out from the crowd.

Users of apps to support people with autism in the UK might like to nominate someone to win the Mind Digital Media award for "an individual or organisation, originating in the UK, that has embraced digital media to raise awareness about mental health issues or support the mental health community. Entries can range from blogs, social media campaigns or websites and should include evidence of reach and impact."

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2. News about how technology industries may be helping to improve employment opportunities for people with autism

There has been a recent spate of articles in the popular press reporting on how people with autism are finding employment in technology firms, including a report on this firm set-up by two parents of boys with autism, and the German software development company SAP who recently launched an autism-specific recruitment drive. However, also see this blog post by a mother pointing out that jobs in technology aren't right for everyone. These reports link the work of the Autism & Technology SIG at IMFAR 2013 with another IMFAR 2013 SIG on Vocational Issues.
3. A couple of podcasts by researchers about how technology is being used to support clinically-relevant research

In this very short podcast from “The Academic Minute”, Matthew Goodwin, co-ordinator of the IMFAR Technology Demo session, discusses how technology can be used to provide research findings with clinical impact by involving children and adults with autism who are not always included in research because their communication or intellectual difficulties make it challenging.

And here’s another podcast, this time by Simon Wallace, discussing his findings from studies using immersive virtual reality technology with children with autism.

4. Information about how recycling old mobile phones can help children with autism in the UK get an iPad

A mobile phone recycling scheme was launched by Manchester-based charity Hearts And Minds. With 165 old phones, any family can get an iPad, and they will also be helping children with autism.

5. Information from the 2012 AWARE event (Autism Software: How to get it out there) include videos of presentations and discussion panels

This event was held in Edinburgh in September 2012. The website now has loads of information to watch or download, which may be of particular use to those moving into research in this field for the first time. This includes talks on the influence of theory in computer-assisted learning, how to design technology for people with autism, how to turn academic products into commercial prospects and more. There are also discussion panels to showcase the perspective of the autism community, practitioners, and commercial representatives. Internationally respected contributors include Judith Good, Ofer Golan, Gerardo Herrera, Olivier Joubert (of Aldebaran Robotics), Wendy Keay-Bright, Sarah Parsons and Thusha Rajendran.

6. UK training dates for Secret Agent Society facilitators

The Secret Agent Society (SAS) is an espionage-themed curriculum and integrated set of resources to teach children social and emotional resilience. The group program is for 8 to 12 year old children with challenges such as high-functioning Autism Spectrum Conditions. Training to become a facilitator for the approach is delivered by the Social Skills Training Institute who have recently announced two new course dates in Edinburgh (1-2 October 2013) and London (9-10 October 2013). In each case registration closes in late August 2013. You can download the original RCT evidence for the program at this link.

7. Recent publications relevant to autism and technology


8. Call for papers - Special Issue of "Frontiers in Human Neurosciences" on "Advances in Virtual Agents and Affective Computing for the Understanding and Remediation of Social Cognitive Disorders"
Recent advances in computer technologies and research now enable to simulate realistic social interaction thanks to the use of increasingly complex computer models. Virtual agents reproducing both human appearance and expressive behaviors are now available for supporting affective interactions with users. Two deeply intertwined fields of knowledge already benefit from such innovations concerning virtual agents and affective computing: psychiatry and social neurosciences. Indeed, these techniques offer a good compromise between reproducibility and ecological validity when designing paradigms that address complex issues such as human interaction, intersubjectivity or social behavior.

Firstly, the use of virtual reality may boost research in the field of social neurosciences which requires naturalistic, although reproducible, experimental situations of increasing complexity. In the past recent years, many researches shed light on contextual effects that may influence social judgments/interactions and the related disorders. New techniques such as virtual expressive agents and computational models of emotions and social interaction offer new ways to address the issues of the social cues (e.g. facial expressions, bodily expressions, etc.) that are integrated by a person while he/she performs empathetic evaluation, mentalizing (theory of mind or mental state attribution), agency judgments, etc. Although its potential for psychological experimentation is obvious, no consensus on experimental methods in virtual interfaces has been reached yet. The almost infinite degrees of freedom of experimental paradigms make it difficult to rely on traditional designs. Indeed, interactive settings require taking into account the unpredictable and even chaotic dynamics that arise from multiple agent interactions.

Secondly, considering the therapeutic use of virtual agents or affective computing technologies, the main asset of these techniques relies on the possibility to reproduce interactive social situations without the threatening or distressing consequences of such situations in the real world. For instance, cognitive rehabilitation is already investigated with schizophrenic and autistic participants within virtual immersive environments. It appears that theoretical insights and experimental data are necessary to address the issues of effectiveness, acceptability, motivation, and to better integrate these innovations within integrated remediation programs.

Keeping in mind the very innovative nature of the fields described here, the aim of the present topic is to delineate the added value of expressive virtual agents and affective computing techniques for the experimentation on naturalistic social interactions and/or for the remediation of social cognition disorders. To this end, original research articles with empirical results grounded on inferential statistics will be prioritized as long as they emphasize the methodological issues that were encountered and the solutions that were proposed. Theoretical articles, reviews and meta-analyses will also be considered as long as they provide an insight on the use expressive virtual agents or affective computing for the disorders of social cognition or their treatments. We invite contributions that assess virtual agents with or without neuroimaging techniques (EEG, MEG, fMRI, etc.). The contributions are not limited to particular disorders but the studies involving patients suffering from mood disorders, schizophrenia and autism are encouraged. Studies of populations without social cognitive impairments will be considered if their relevance for understanding disorders is specifically discussed.

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