

Competition results

Competition Name/Year	SBRI Assistive Technology Competitions / 2013 / Phase 1	
	Ready steady STEM: increasing the accessibility of science, technology, engineering and maths subjects.	
Company name that won	Project title	Contract value
Alta Innovations Ltd	Accessible Chemical Diagrams	£18,408 (inc VAT)
Project Description (provided by Applicants on application form)		
<p>Chemical diagrams, in particular molecule depictions are a prevalent means of conveying information in chemistry and biosciences. However, they are commonly given in standard image formats leaving them inaccessible.</p> <p>Our technology will allow the generation of fully accessible chemical diagrams and their inclusion into electronic documents without the need for content providers to alter their authoring processes nor for readers to use specialist software to access information given in diagrams.</p> <p>Instead we provide fully automated software that will recognise molecule images and transform them into scalable vector graphics that will provide readers with the following accessibility features:</p> <ol style="list-style-type: none"> 1. Scaling and magnification of images. 2. Support for screen readers via auditory descriptions embedded into the diagrams. 3. Highlighting of components as visual indication of current reading position. 4. Interaction with diagrams to step-wise and recursively explore single components to allowing readers to engage with the content at their own pace. <p>Our software can be integrated into electronic documents via standard JavaScript ensuring compatibility with HTML5 and ePub3 standards. It can be used both as client software for permanent image transformation in electronic documents or as an online service for the transformation of images on the fly, thus making it possible to have fully accessible diagrams in any browser or ePub3 reader for online or offline reading.</p>		

Competition Name/Year	SBRI Assistive Technology Competitions / 2013 / Phase 1	
	Ready steady STEM: increasing the accessibility of science, technology, engineering and maths subjects	
Company name that won	Project title	Contract value
ECS Partners Ltd	STEMReader	£44,356.00 (inc VAT)
Project Description (provided by Applicants on application form)		
<p>STEMReader: hearing maths through technology.</p> <p>We understand mathematical ideas by making connections between language, symbols, pictures and real-life situations¹. Individuals who face barriers with reading, comprehending and/or seeing these connections, such as those with print disabilities, dyscalculia and learning difficulties always struggle with STEM subjects and professions. Hearing and seeing symbols together can help make those links. These connections are important whether learning numbers 1 to 10, dealing with calculations in the workplace or understanding maths at university. For up to 10 million individuals in the UK affected by print disabilities or dyscalculia, having a tool to read aloud mathematical language and symbols at an appropriate level could ameliorate many difficulties they experience when manipulating mathematical concepts. The lack of accessibility in mathematical notation is impacting the progress of students working at basic functional skills levels through to degree as well as in the workplace at all levels from apprentice through to professionals such as scientists and engineers.</p> <p>Development of accessibility tools for maths has concentrated on users with advanced mathematical skills (and language) and on website technology. This has not addressed the need of individuals who are striving to develop and use functional maths skills. It has not addressed the needs of the wider learning and working community. STEMReader aims to deliver a significant step forward in reading aloud maths for those working from functional to advanced levels. For the first time it will enable a broader range of publishers than educators to easily share accessible STEM materials that can be read and understood by all types of user and will be aid individuals who want to have maths notation read aloud while they read and as importantly write documents.</p>		

¹ Haylock, D. (2003). *Understanding mathematics in the lower primary years: A guide for teachers of children 3-8*. SAGE.

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	Ready steady STEM: increasing the accessibility of science, technology, engineering and maths subjects		
Company name that won	Project title	Contract value	
Sheffield Hallam University Enterprises Ltd.	EQUS (Enhancing the Quality and Usability of Spreadsheets)	£50,665.44 (inc VAT)	
Project Description (provided by Applicants on application form)			
<p>There are an estimated 3 million people in the UK who are dyscalculiac and with 5% of school and higher education learners challenged by it. This group faces significant challenges when looking towards developing their education in numerate disciplines such as science, technology, engineering and maths (STEM). There are few approaches to addressing this apparent barrier. One tool common to establishing confidence and educational progress in STEM subjects is the spreadsheet. Widely used in work and education, at school level and in higher education the spreadsheet is a core generic tool to understanding in numerate subjects.</p> <p>To help address the difficulties that dyslexics and dyscalculics face in STEM subjects our innovation will aid the understanding of spreadsheets. Despite their popularity spreadsheets are surprisingly error prone. Users need to carefully study formulas on a computational level despite their representation in a textual form. The presentation of conditional behaviours within a single line illustrates this: =IF(B4<400,B4*7%,IF(B4<750,B4*10%,IF(B4<1000,B4*12.5%,B4*16%)))</p> <p>Our innovation aims to make the relationship between spreadsheet functionality and its visual display easier to understand than the default textual form. This will operate as an Microsoft Excel plug-in that automatically constructs more fit for purpose re-presentations of the formulae and processes being used.</p> <p>For dyslexics, and many others faced with having to learn with, spreadsheets, this will reduce barriers to understanding and develop more confident learners willing to face the STEM disciplines.</p> <p>Relevant literature sample</p> <ul style="list-style-type: none"> □ Saariluoma, P. & Sajaniemi, J. (1991). Extracting implicit tree structures in spreadsheet calculation. <i>Ergonomics</i>. □ Hendry, D., & Green, T. (1993). CogMap: a visual description language for spreadsheets. <i>Journal of Visual Languages & Computing</i>. □ Chambers, C., & Scaffidi, C. (2010). Struggling to excel: A field study of challenges faced by spreadsheet users. In <i>VL/HCC, 2010 IEEE Symposium</i>. 			

Competition Name/Year	SBRI Assistive Technology Competitions / 2013 / Phase 1	
	Ready steady STEM: increasing the accessibility of science, technology, engineering and maths subjects	
Company name that won	Project title	Contract value
Plextek Limited	OSLO - Opening STEM Learning to Everyone	£41,005.00 (Inc VAT)
Project Description (provided by Applicants on application form)		
<p>A project to create an open source, modular accessibility suite that allows non-traditional user input methods and user set document styles. The initial aim of the project is to open science, technology, engineering and maths (STEM) learning to those who would typically struggle to use a computer; either because of visual impairments, learning difficulties or difficulties with using a keyboard and mouse.</p> <p>Plextek is putting the presentation of information back in the hands of the user. Typically websites do not have built in options to change their style, and when such options are provided it is normally limited to changing the background colour.. OSLO converts HTML documents and forms, including any embedded MathML code, into formatted document based on the user's style preferences, giving the user a consistent and unencumbered experience. For example, a user with dyslexia will be able to make every document conform to the British Dyslexia Association style guide.</p> <p>Leap Motion has been selected as the first device to be supported by OSLO. However, the software will be easily expanded to incorporate other non-traditional methods, such that any individual or company may write a module to add a new method. Plextek is seeking to challenge the keyboard and mouse monopoly, even for able-bodied users.</p> <p>To give even greater flexibility Plextek will be bringing OSLO to Android tablets.</p>		

Competition Name/Year	SBRI Assistive Technology Competitions / 2013 / Phase 1	
	Good to go: Increasing independence in unfamiliar environments or in accessing information.	
Company name that won	Project title	Contract value
Coventry University Enterprises Ltd	Work Buddy	£32,240.00 (inc VAT)
Project Description (provided by Applicants on application form)		
<p>Work Buddy is a joint venture between Coventry University's Serious Games Institute (Lead design), Hereward College (User requirements and evaluation) and Serious Games International (Technical development and commercialisation). It is a Cloud based application that allows workers to develop and adapt personal learning profiles based on their own requirements and their responsibilities to their employer. Once created, the profiles support workers during their daily work activities, giving them greater independence and reducing the support workload of their supervisors.</p> <p>Fundamental to its approach is the ability to break work activities down into the level of detail required for each user; to quickly illustrate and annotate each task; and to structure and restructure tasks over micro and macro timescales, providing a bespoke instructional diary for the workplace.</p> <p>Work Buddy is delivered in the form of an App that can be accessed either using a mobile device, or directly through a PC web browser. The design of the App focuses on simplicity of use and accessibility, whilst allowing users to create and view audio visual content and to quickly organise and adapt this into structures that match their (changing) work requirements.</p> <p>Work Buddy will be designed in consultation with students preparing for work or work based placements from Hereward College. The experience and requirements of the students will inform the development of an intuitive user interface that employs suitable input / output devices, and a user centred approach to the functionality and usability of the technology. Part of the feasibility study will involve assessing the suitability of voice control for the App, and the students will help in evaluating this. In a working population that includes disabled, elderly and migrants, there is no 'one size fits all' solution to continual and varied training requirements. Work Buddy engages workers in shaping their own personal learning resources.</p>		

Competition Name/Year	SBRI Assistive Technology Competitions / 2013 / Phase 1	
	Good to go: Increasing independence in unfamiliar environments or in accessing information.	
Company name that won	Project title	Contract value
Fundosa Technosite S.A.	VirtuAssist	£71,026.20 (excl VAT)
Project Description (provided by Applicants on application form)		
<p>Virtual Assistance for Independent Performance in a Changing Working Environment (VirtuAssist) People with learning difficulties and/or those with memory problems face barriers in the working environment due to the necessity of additional supervision, reminders, or real time technical instructions and information, especially in changeable tasks (very common in today's enterprise necessities), and with challenging or unfamiliar equipment.</p> <p>VirtuAssist provides guidance to operate working equipment, so end-users can work with minimal supervision in these challenging environments. By means of cutting-edge technologies (computer vision, pointing gesture recognition, machine learning and task modelling) and through popular wearable devices (smart-glasses), VirtuAssist provides personalised information and interaction according to the end-user needs and preferences in a fun and effective way.</p> <p>Through the smart-glass camera, the system recognises the equipment in front of the user (e.g. a printer). Then, through the smart-glass, VirtuAssist provides descriptions of the equipment, information of the function of each element (e.g. a button) in a sequential way or of the element that the end-user is pointing. Moreover, a set of pre-recorded tasks are available to guide the end-user, step by step, in each action on the equipment elements required to carry out a specific task in an optimal way. From the enterprise perspective, VirtuAssist reduces the additional supervision and support required by some people with learning difficulties and/or those with memory problems, which make them more cost efficient, thus increasing the enterprise's willingness to hire them.</p> <p>VirtuAssist improves the independence of the end-users, enhancing their competence and confidence, and consequently their life and career opportunities. Moreover, instead of the sense of stigma felt by some disabled people when wearing other Assistive Technologies (ATs) or requiring frequent support, it provides a sensation of being stylish.</p>		

Competition Name/Year	SBRI Assistive Technology Competitions / 2013 / Phase 1	
	Good to go: Increasing independence in unfamiliar environments or in accessing information.	
Company name that won	Project title	Contract value
NSF Trading Ltd	FlyCatcher	£54,750.00 (inc VAT)
Project Description (provided by Applicants on application form)		
<p>Have you approached a piece of equipment and wanted to know how it works or be clear about the safety instructions? Because you have a disability you may not be able to see or physically access the manual, if it's even there, or have time to process the instructions so find yourself having to ask someone to help you! You arrive at work on your first day, it is an unfamiliar environment and with so much to learn - How does the copier work? Who works in that office? What is the fire safety procedure? What if your mobile or tablet automatically presented the information to you without you having to ask for it?</p> <p>For someone with a physical or sensory disability access to information in unfamiliar environments using FlyCatcher, could become very easy. FlyCatcher is a downloadable application for smartphones and tablets that is able to 'catch information on the move (or on the fly!)' by using pre-programmed information read from triggers positioned in an environment and sending information directly to you when you come within range.</p> <p>The application presents information as sound, text or images according to user preferences. For example, a user approaches a piece of unfamiliar equipment in a workplace or enters an unfamiliar environment – as they come within 50cm to an object trigger the application picks up a signal and sends the information about that object to the device, either pre stored on the device or pulled from the web.</p> <p>This may be a sound file speaking to the user the safety instructions, or a video file with short video of how to use the equipment or a simplified text file with key information. All you do is say whether you want the information.</p> <p>FlyCatcher - Information that comes to you when you need it.</p>		

Competition Name/Year	SBRI Assistive Technology Competitions / 2013 / Phase 1	
	Good to go: Increasing independence in unfamiliar environments or in accessing information.	
Company name that won	Project title	Contract value
Edinburgh Research & Innovation Ltd	Spatial Memories Framework	£80,114.40 (incl. VAT)
Project Description (provided by Applicants on application form)		
<p>Spatial Memories Framework: The goal is of <i>Spatial Memories</i> is to make learners with disabilities more independent as they do not have to rely on others to make reminders, hints and checklists on their behalf. The basic concept is a smartphone / tablet App Authoring framework, using bespoke maps and interfaces. Individual learners will be able to record oral instructions and make audio notes, capture written instructions and diagrams, and associate these with locations and activities (e.g. leaving or entering a building) using an App tailored with their preferences.</p> <p>This web-based authoring tool will allow learning and work placement providers with minimal technical knowledge to adapt and customize the App to meet the needs of individual learners. This should improve the learner's confidence in working unsupervised in different environments. The app interface design themes (layout, colour schemes) and interaction mechanisms (touch vs. voice) and map content (de-cluttering symbols and colours) can all be changed to meet the needs of an individual.</p> <p>We envisage <i>Spatial Memories</i> will support learners in a variety of learning environments: classrooms and libraries but also across campuses and workplaces, including parks, woodlands and gardens We also expect benefits for peripatetic workers where it is necessary to visit and perform tasks at a number of geographically distributed sites, e.g. schools, nursing homes etc. The project schedule focuses on iterative clusters of work with a group of learners in situ, and we will have developers on hand to make changes on the day and to re-test and re-work the learners' ideas. Our plan is to adopt a user-centred design approach given the focus for <i>Spatial Memories</i> is to assist learners to create their own set of reminders or hints using an App customized for them.</p>		

SBRI Assistive Technology Competitions 2011

Phase One began in April 2011 when seven companies were funded to develop 'proof of concept' as part of a feasibility study.

Phase Two began in January 2012 where four companies were funded to produce a well-defined prototype.

Competition Name/Year	SBRI Assistive Technology Competitions / 2011 / Phase 1	
	Making waves: gesture-based communication system	
Company name that won	Project title	Contract value
London Met Enterprises Ltd (t/a Gamelab London)	Gesture recognition for learning disabled non-verbal communication.	£95,000.00 (Inc VAT)
Project Description (provided by Applicants on application form)		
<p>PROBLEM: Our proposal is to apply "Natural Interaction" tracking to gesture recognition through sensors such as Microsoft Kinect working with a finite set of Makaton-like gestures supporting emotional and physical needs through a user-centred design approach. Our development work is as much about user engagement as it is about technology application.</p> <p>Makaton is an internationally recognized communication programme, used in more than 40 countries worldwide. A large network of people with learning and/or communication difficulties, and their parents and carers, use its signs for communication. It is used in the 'Something Special' inclusive BBC series for kids.</p> <p>Our system will offer such users the opportunity to communicate their wishes and communication needs in locations and contexts where they would not necessarily have carers who understand signing.</p> <p>SOLUTION: Common gesture-recognition solutions revolve around a camera or multiple cameras. However, these camera/webcam-based solutions require heavy levels of image processing on the entire image after every frame capture for background subtraction and extraction of useful 3D data of the user. Furthermore, the hand exhibits significant amounts of articulation and self-occlusion that can cause difficulties with tracking, while interactive applications require that hand tracking perform in real-time. Therefore any solution requires quick processing and output. Our decision to focus on Kinect as our core technology will provide the most effective technological solution to depth-information processing, cost, availability, and ease of installation and use.</p> <p>Our development would provide the genesis of a gesture recognition system for Makaton-like signing (part of a complex primary language) and gesturing (more limited communication signaling more basic needs / expression) which will operate on a finite set</p>		

of key lexical items supporting basic physical and emotional needs. It will also allow the possibility of extension to more complex BSL signing in the future.

Phase 2 Funding: January 2012

Project Title:	A description of proposed innovation:	Total project cost:
uKinect	Gesture recognition for learning disabled non-verbal communication including Makaton signing – using Kinect technology to produce games, training and support applications	£150,000.00 (inc VAT)

Competition Name/Year	SBRI Assistive Technology Competitions / 2011 / Phase 1	
	Making waves: gesture-based communication system	
Company name that won	Project title	Contract value
Technabling Ltd	Portable Sign-Language-to-Text Translator (PSLT)	£75,000 (Inc VAT)

Project Description (provided by Applicants on application form)

We aim to concept-proof and prototype software for translating sign language into text and commands. The software will work with a wide range of handheld camera-enabled devices (e.g., smart phones, notebooks, tablet PCs). Our software will run on open-source operating systems (Android, Symbian, and Linux portings in general) to maximise the number of devices where it will be usable by people in different conditions and environments.

The resulting system will operate using a four-step processing cycle, namely:

1. The user will simply ‘talk to the device’ in sign language. The video stream captured by the device camera will be software-processed to recognise user gestures, identifying both those with an atomic meaning (fine gestures) and those (gross gestures) that are part of a sequence which only has meaning as a whole
2. Sequences of (one or more) atomic user gestures will be mapped into one or more atomic concepts from a locally stored core library of frequently used concepts
3. Each concept will be parsed into one or more words or commands
4. Words will be assembled to generate plain text sentences or to issue commands sequences to appliances. Both sentences and commands will be delivered to local/remote devices using a range of communication technologies (e.g., Bluetooth, wireless LAN, broadband) and rendering technologies (e.g., GUIs, audio) already integrated in the targeted devices.

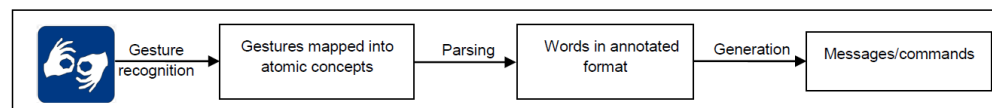


Figure 1 – From gesture to text and commands: the sign language processing cycle

Our software will be personalised to the gesture expressivity of each individual user by way of simple initial training. Context-dependent gesture libraries will be loadable on demand, based on the actual scenarios and on the individual user profile. The resulting system will operate autonomously, without any permanent (wired or wireless) connection either to other devices or to the internet most of the time. The output will be either natural language or device commands.

Phase 2 Funding: January 2012

Project Title:	A description of proposed innovation:	Total project cost:
The Portable Sign language Translator – Phase 2	<p>We want to bring to market a fully-fledged version of the Portable Sign Language Translator (PSLT), an innovative software application concept-proofed in Phase 1 and designed to work on a variety of portable off-the-shelf devices with the following goals</p> <ol style="list-style-type: none"> 1. Allow young learners with speech difficulties to create and use customised libraries of hand gestures and signs that express the domain-specific concepts (words, symbols) that are needed to discuss their topics of study with instructors, trainers, experts, and peers 2. Allow people with reduced mobility and speech difficulties due to ill health or accidents to issue commands to appliances and devices either around the home or on the move using a simple but effective set of hand gestures tailored their physical capabilities 3. Allow people with speech difficulties to use general-purpose sign languages (e.g., the British Sign Language, BSL), to talk about everyday issues and situations, personalising the language to take into account regional variations and individual preferences or needs. 	£150,000.00 (inc VAT)

Competition Name/Year	SBRI Assistive Technology Competitions / 2011 / Phase 1	
	Making waves: gesture-based communication system	
Company name that won	Project title	Contract value
University of Wales Institute, Cardiff.	Somantics	£60,000 (Inc VAT)
Project Description (provided by Applicants on application form)		
<p>Somantics is a suite of therapeutic applications that use touch, vocalisation and gesture inputs to capture and augment the communicative desires of young people with Autism Spectrum Conditions (ASC). Somantics are user-led, their function is to promote greater self-awareness, confidence and dependence through 3 distinct interactive fine- and gross-motor modes, encapsulating the holistic nature of this proposal.</p> <p>1) Somantics Play are exploratory touch input applications. Repetitious, rhythmic and cause and effect actions will be afforded through a calming, abstract interface. The goal is to reduce tension and to assist in gaining confidence with the technology, increasing its likelihood of early acceptance and adoption (Keay-Bright, 2007; 2008; 2009; 2011). A “screen grab” mode will enable individual artworks to be saved into a personal Somantics Gallery.</p> <p>2) Somantics Create applications will build on Somantics Play by adding input from a built in or external camera. Young people will be encouraged to capture facial and gestural expressions or objects of interest, and to organise them in their Somantics Gallery where they can customise them, using a menu and/or touch, as unique expressions of identity and mood.</p> <p>3) Somantics Perform. Artworks will be projected onto an appropriate surface that can afford high visibility and amplification. What makes Somantics Perform really unique is that we will use gesture recognition technology to convert these projected artworks into responsive environments, where they can be manipulated through multi-touch, sound and movement.</p> <p>The high visibility and mirroring of interest into the projected space can reinforce feelings of self-control. Furthermore, discovering a user's interest and using that interest as a trigger for communication is highly recommended by experts in speech and language therapy. The multi-modality of Somantics directly targets this need.</p>		

Competition Name/Year	SBRI Assistive Technology Competitions / 2011 / phase 1	
	Plain sailing: easy, navigable and personalisable access to digital information	
Company name that won	Project title	Contract value
Portset Systems Ltd	EasiPAD - making PAD computers accessible	£58,638.00 (inc VAT)
Project Description (provided by Applicants on application form)		
<p>The EasiPAD project will provide a freely accessible open source software package which can run on a wide range of 'pad' computers, and which will provide a flexible user interface (UI) enabling the operation of these pad computers by people who are visually impaired.</p> <p>The software will include Text to Speech (TTS) allowing users to identify the position and function of on-screen touch keys by 'hovering' a finger over the appropriate area of the screen, and to provide a reading facility for documents, ebooks and communications such as email and Internet.</p> <p>The solution will also provide voice recognition facilities, enabling a user to input text or commands to the computer by speaking into a microphone.</p> <p>The project will bring together some of the open source applications that already exist on different platforms to meet the core requirement of the challenge. It will identify where there are shortcomings with existing systems, determine how to model requirements of visually impaired users into a mobile format suitable to provide an accessible and usable mobile solution. Manipulation of digital data either in text or audio format is already available in formats that are accessible to visually impaired users on PC based platforms, though not necessarily in an open source option.</p> <p>Our choice for this project platform is the recently released Android Pad because this product hardware and software is built on open source solutions. It provides the core of being a complete computer solution and also as a mobile phone. Android mobile devices are produced by a range of manufacturers thereby creating a competitive market place for retail sales.</p> <p>EasiPAD meets the primary requirement challenge to achieve <i>personalisable access to digital information</i> in an Anywhere Anytime portable solution.</p>		

Competition Name/Year	SBRI Assistive Technology Competitions / 2011 / phase 1	
	Plain sailing: easy, navigable and personalisable access to digital information	
Company name that won	Project title	Contract value
BookScholar	BookScholar	£35,467.00 (inc VAT)
Project Description (provided by Applicants on application form)		
<p>To create an online service providing users access to textbooks in accessible format. The site will allow access to content using various assistive aids in order to mould the reading experience to each individuals needs. The concept will make use of cloud computing in order to allow users to read books from any computer, laptop or mobile device with no requirement to install assistive aids on each piece of hardware.</p> <p>The user will access BookScholar through a secure portal; the user will be able to make use of a completely accessible website to locate the required content. The site will be designed to the highest level of accessibility allowing the user to manage levels of magnification, talking tools and contrast options. The user will be able to make use of their standalone aids to work on the site. Whichever combination the user chooses will be maintained regardless of which computer they are on. We also intend to develop voice activated technology so that the website can be navigated by voice commands alone.</p> <p>We will develop a reader that allows the user to access content in the most accessible format. As each individual has their own requirements the reader will allow users to magnify content, change contrast, adjust line spacing, magic ruler (follows the users navigation through lines), screen reader and Braille functionality.</p> <p>The user will be able to access books whilst browsing the internet; we will also develop security features that will allow for the textbooks to be read off-line without the necessity for DRM protection. Allowing the user complete access to the content. The user will be able to plug-in documents to the site from their USB/Disks and make use of the BookScholar assistive aids from any location, thus reducing the reliance of the user on one specific computer.</p>		

Competition Name/Year	SBRI Assistive Technology Competitions / 2011 / phase 1	
	Plain sailing: easy, navigable and personalisable access to digital information	
Company name that won	Project title	Contract value
iansyst Limited	MyDocStore	£79,549.00 (inc VAT)
Project Description (provided by Applicants on application form)		
<p>MyDocStore: a Multi-Platform, Accessible Document Conversion & Management Tool using cloud, desktop and mobile based file management, giving easy, personalisable access to accessible digital information.</p> <p>The innovative MyDocStore addresses the missing link in accessible transfer of files with users' preferences for accessing digital resources. Visual in Annex A.</p> <p>MyDocStore provides:</p> <ol style="list-style-type: none"> 1. A cloud-based location to convert and transfer content between Desktop and mobiles. 2. Customisable, centralised user content accessibility preferences, with PC and mobile syncing. 3. Integration with existing accessible format assistive and conversion technologies. <p>-- a flexible, scalable, cost-effective and customisable conversion solution across PC and mobile platforms.</p> <p>By using the best existing AT it meets all 8 points, with some current limitations on some mobile platforms and particularly annotation of audio files. We can address this in phase 2 if DAISY standards and new mobile AT have not already.</p> <p>We provide an open API for other applications to use the documents and user preference settings developed for MyDocStore.</p> <p>MyDocStore has three parts:</p> <ol style="list-style-type: none"> 1. The accessible MyDocStore cloud service provides core functionality: it stores documents for different devices, and integrates a number of cloud-based conversion services (e.g. to audio, Braille, DAISY, etc.). Transferring documents to MyDocStore via email or direct upload enables conversion to formats defined in users' settings. Cloud-based conversion is more cost-effective as users only access services they require and use many free or open-source tools. 2. The simple-to-use PC application accesses all MyDocStore functions plus: <ul style="list-style-type: none"> • Defines user settings for converting documents. • Converts some documents locally with automatic conversion option. • Organises documents for syncing with MyDocStore, enabling bulk file conversion and remote file access. 		

3. The **Mobile interface** accesses the cloud service, manages conversion settings and documents, downloads preferences and sends to external services (email, file hosting), using device-specific settings and built-in accessibility support.

Phase 2 Funding: January 2012

Project Title:	A description of proposed innovation:	Total project cost:
MyDocStore	To bring a Multi-Platform, Accessible Document Conversion & Management Tool using cloud, desktop and mobile based file management, to market. Give easy and personalisable access to all forms of accessible digital information for learners and those seeking or in employment.	£100,000.00 (Inc VAT)

Competition Name/Year	SBRI Assistive Technology Competitions / 2011 / phase 1	
	Plain sailing: easy, navigable and personalisable access to digital information	
Company name that won	Project title	Contract value
System Associates Limited	Enhanced Digital Delivery Solution	£87,072.00 (inc VAT)
Project Description (provided by Applicants on application form)		
<p>It is our belief that a major part of the problem in simplifying and speeding up access to documents for accessible users lies in the presentation of material before it ever reaches a screen reader or other device.</p> <p>With recent advances in text mining and text analysis technologies we believe it is now possible to process documents in such a way as to provide a range of accessibility enhancements, regardless of the original format, and deliver these in readers and navigators that will significantly improve the experience of the reader.</p> <p>The technology in question is used heavily in the analysis of large text corpora and is increasingly open source. It provides techniques that are capable of automatically indexing points, structures, facts, keywords and meaning in a document or document fragment.</p> <p>Our proposal is to create a portable software application that will analyse and pre-process documents or fragments and then deliver them via purpose-built or existing readers which will have a number of new and novel features, specifically this will deliver:</p> <ul style="list-style-type: none"> • An easily navigable document regardless of its original format • A method of skimming or speed reading for users with visual and physical impairments • A trial method of simplifying text for users with learning difficulties by analysing complex facts and phrases using a purpose-built ontology <p>For example, for the visually impaired user we envisage a reader that will provide page summaries highlighting key facts. Users can then decide to read the page in depth or move on, just as a normal-sighted person would. The reader would have two voices so the user can differentiate original text from navigation points and text/meaning highlights. The reader would provide fast navigation</p>		

through the generated navigation points with the ability to switch into normal reading mode at any time.

Phase 2 Funding: January 2012

Project Title:	A description of proposed innovation:	Total project cost:
Navitext, formally Enhanced Digital Delivery Solution	Sematnically enhance document and screen reading solution for the visually impaired scholar.	£98,040.00 (Inc VAT)