The project aims to collect existing technical signs from Deaf BSL users who have expertise in particular fields. Where technical signs don’t yet exist in BSL, the team recruits Deaf subject experts to discuss terms and agree a new sign. The sign is added to the online glossary on the Scottish Sensory Centre website.

Definitions are then created in BSL with the help of sign linguists and the Deaf subject experts. Finally, the definitions are translated to English and graphics or lab videos added to enhance the online dictionary. So far 850 signs are online, all in the fields of science and maths. Reports from pupils and teachers are very positive, but they would like more technical terms in BSL covering a wider range of subject areas.

Why do some languages have less vocabulary?
Languages like BSL have until the past 30 years mainly been used in domestic and work settings, particularly in industries which had a deaf workforce, such as Remploy. Since 1993 when Disabled Students Allowance was first available, Deaf BSL users have been able to study at university, and subsequently enter a much wider range of work and professional settings. Languages develop new vocabulary when there is a need for users to communicate new ideas. English has had many phases of vocabulary expansion. However, there are many other languages across the globe which initially had small vocabularies because of a period of colonisation or oppression. Lang et al. (2007) note that educators often led the process from the 1970s of standardising and publicising technical signs.

The demand from education
Despite the fact that most profoundly deaf children in the UK are now implanted at a young age, the demand for technical terms in BSL is still strong. The SSC Glossary website currently receives 14,000 hits a month, a quarter from Scotland. Not all severely and profoundly deaf children are implanted, and not all implanted children use speech. There is no easy way for families to predict the outcome of a CI operation and period of oral habilitation. In some countries, e.g. Australia, the trend to mass implantation has led educators to abandon sign language (Johnston, 2004). In the UK, BSL users are determined to maintain standards for interpreters and for people who work with them (BDA, 2012). This community pressure has influenced some teachers of deaf children, Communication Support Workers (CSWs) and deaf charities to improve the quality of signing in schools and colleges. In Scotland the Deaf community’s demand for a BSL Act on the model of the Gaelic Language Act may lead to the maintenance of the language, in contrast to the rapid decline in Auslan which has occurred in Australia.

How are new terms created in BSL?
Languages use many ways of expanding the lexicon: borrowing, compounding, simplification and language play; in BSL iconicity, lexicalisation and metaphor are also important processes. Examples of all these can be found in the BSL glossary:
- **Borrowing** - from English. The Glossary team accepts the use of fingerspelling for names of units and chemical symbols.
- **Compounding** - ROCKET+PLANE= SPACE-SHUTTLE (Sutton-Spence & Woll, 1999)
- **Simplification** - the sign for AMNIOTIC-SAC originally included the sign BABY but users soon dropped it as the place of articulation on the lower body made the meaning clear.
- **Language play** - see NON-TERMINATING-DECIMAL, Maths Glossary
- **Iconicity** - REFRACTION, Physics Glossary traces the light path through two different media
- **Lexicalisation** - borrowed terms from English, often compounds, become one new sign in BSL. (Johnston & Schembri, 2007) e.g. HEART-ATTACK Biology glossary
- **Metaphor** - SPEED uses a visual metaphor where an object is large when near then rapidly diminishes into the distance.

Morphologically related signs: MASS and DENSITY

Morphologically related signs
Through the process of explicitly discussing these features of vocabulary expansion in BSL in the development teams, we discovered that many of the new terms were related to each other. MASS, DENSITY, MOMENTUM, GRAVITY all share a constituent handshake (MASS) which links the concepts. Comments to the team from both deaf and hearing users of the Glossary site suggest that these families of signs are particularly helpful to pupils learning science.

Definitions
A smaller team consisting usually of a BSL linguist, a Deaf subject expert and a Deaf science teacher produced the definitions. The structure and organisation of these pieces of formal BSL text have been highly rated by teachers, CSWs and deaf pupils. This is a small but valuable online corpus illustrating how BSL can be used for functions of giving information, defining, describing and elaborating. Deaf BSL users have a very insecure presence in UK deaf education, so this online resource is a reminder of what a fluent BSL user would do when teaching, if they were allowed into the classroom.

References

SSC (2012) BSL Glossary (accessed 1.3.12)
http://www.ssc.education.ed.ac.uk/bsl/list.html

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**Metaphor**: Sign for SPEED in steps

**Iconicity**: REFRACTION, Physics Glossary traces the light path through two different media

**Lexicalisation**: borrowed terms from English, often compounds, become one new sign in BSL. (Johnston & Schembri, 2007) e.g. HEART-ATTACK Biology glossary

**Morphologically related signs**: MASS and DENSITY

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