Challenge and Innovation

Keeping Braille Accessible and Relevant
**Education For All children with Visual Impairment (EFA-VI) Global Campaign**

The Education for All Children with Visual Impairment (EFA-VI) is a Global Campaign and programme of the International Council for Education of People with Visual Impairment (ICEVI) acting in partnership with the World Blind Union (WBU) to ensure that all girls and boys with blindness and low vision enjoy the right to education.

The Campaign, launched on July 16, 2006 is focusing on children in the developing world where currently it is estimated that less than ten-percent have access to education.

**Highlights of the Campaign**
- addresses three key Millennium Development Goals: -achieving universal primary education, -promoting gender equality and -developing global partnerships for development.
- stresses the right to education as emphasised in the UN Convention on the Rights of Persons with Disabilities.
- works within the framework of the general and special education systems.
- focuses on awareness and demand creation for education of children with visual impairment.
- stresses on the provision of appropriate support in educational settings.
- capacity building of teachers and others, development of literature, production of assistive devices and operational research are important elements.

**Indicators of success**
- increased enrolment rates
- reduced dropout rates,
- improved access to support services, and
- educational achievement for children with visual impairment, on par with non-disabled children.
Global Campaign on Education For All Children with Visual Impairment (EFA-VI)
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2012 has got off to a flying start, with no shortage of things to do. In the week immediately following the New Year, I visited Hanoi with Dr. Mani to see our EFA-VI (Education for All Visually Impaired Children) campaign in action and also our higher education project which is supporting visually impaired students to pursue their studies from a resource base. We had an animated discussion with the students, who demonstrated an impressive degree of self-confidence and, we thought, leadership potential for the future. Vietnam, as one of the first off the mark, has been blazing a trail for EFA-VI for the last five years. Vietnam was chosen as a focus country because it possessed a number of the characteristics which had been identified as most likely to make for success. These included government commitment and good collaboration with a strong organisation of the blind, and the Vietnam Association of the Blind and the government have been demonstrating that this was a shrewd prescription. I was encouraged by the work I saw, in particular by the enthusiasm of the students, and it was clear that ICEVI was adding value through the provision of accessible textbooks in a way which was much appreciated.

From Hanoi we went on to Bangkok for a two-day meeting of the International Organising Committee which is planning the joint assemblies of ICEVI and WBU taking place in Bangkok from 10-18 November. We went through every aspect of the event to make sure that everything was in place down to the last detail. As you will recall, WBU’s Assembly and associated meetings will run from 10-16 November, and ICEVI’s conference will run from 15-18 November. There will thus be two days of overlap, when plenary sessions, parallel sessions and workshops of interest to both organisations will be held. November 17th will be an EFA-VI strategic planning day for ICEVI, WBU, our international partners and global agencies, and on Sunday 18 November we will hold our own General Assembly.

Further detail about the strategic planning day will follow, but a Joint Days Programme Committee has made good progress with identifying topics of mutual interest to both organisations to be featured during the two days of joint sessions. There will be plenary sessions on the right to read, access to technology and employment. Francis Gurry, Director-General of the World Intellectual Property Organisation (WIPO) will be the keynote speaker for the first, Karen Wolfe for the third and there are almost too many to choose from to lead the technology session. Keynotes will be followed by panel discussion with scope for interventions from the floor.

Topics identified for parallel sessions with a panel of speakers are:

- Early intervention
- Promoting braille literacy
- Multiple disability and vision impairment
- CBR - WHO Guidelines and the World Disability Report
- Voices of youth and parents
- Employment - preparing people, finding jobs and staying employed
- Technology to read, travel, learn, shop, socialise and watch TV, etc.
- Advocacy and networking
- Accessibility
- UNCRPD & CRPD toolkit
Rights-based education

Emerging challenges and opportunities in mobility and wayfinding - silent vehicles, shared spaces and GPS-BASED technology for independent travel

Acceptability of disability in society.

Topics identified for workshop sessions (with limited numbers to allow interaction between invited presenters and participants) are:

Technology
Practices and challenges in EFA-VI
Research in special education
Encouraging physical activity among blind and partially sighted children, adults and older persons
Using social networking to engage our members and the public
Pre-employment “Train the Trainer” program
A new inclusive approach to government-funded curriculum materials for the digital age.

As previously indicated, with conference activity devolved more to the regional level, we envisage that ICEVI's core contingent at the global event will essentially consist of the members of the General Assembly (106 persons). However there will also be scope for anyone else who wishes to attend on a self-funding basis (certificates of attendance will be available), and of course there will be those who are invited to lead or participate in the “joint days” sessions. Registration should be open by the time you read this, so please register as soon as possible if you wish to attend so that we can begin to get an idea of the likely level of attendance from ICEVI. You will appreciate that with the new format, this remains even more of an unknown quantity than usual until we can see the level of registrations.

I hope there will be something to attract a number of you in the outline of the programme I have given you. The Thai Association of the Blind are certainly leaving no stone unturned to make the Assembly a high profile and lively event.

You can register at:
http://wbu-icevi2012.org/Registration.html

Registration rates are as follows:-

**WBU General Assembly, joint days & ICEVI Assembly:**

<table>
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<tr>
<th>Category</th>
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<tr>
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**Joint days and ICEVI Assembly:**

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Should you wish to add the WBU’s Diversity Forum, which will take place on 8-9 November, you need to add US$ 100 to the all in price.

I recently had a telephone conversation with Gordon Brown, the former UK Prime Minister, who is now a director of the Global Campaign for Education. He asked us to let him have a global strategy for taking the EFA-VI campaign to the next stage that he could show to people to canvass support. This is a tremendous opportunity and a group of us from ICEVI, WBU, IAPB and CBM will be meeting in London towards the end of March to prepare the necessary documentation.

Then in April we will have the next in the series of regional strategic planning meetings - this time for the East Asia region in Bangkok. Others will follow in Latin America and our other regions until we have a comprehensive global plan, so we obviously have an exciting year ahead of us.

I send my very best wishes and look forward to working with many of you during the course of it,

Colin Low
President, ICEVI
Welcome to another issue of the Educator; the first issue for this calendar year. This is the year when ICEVI will be holding its general assembly in Thailand. In the issue following this, there will be an account of the meeting and information on the success of the year and progress on activities of the organization. We at The Educator will be present at the meetings to share the latest stories and the progress of the regions in the efforts of the education for all.

In this issue and the next, we will be focusing on braille. I want to thank Pete Osborne of the RNIB and the International Braille Council for shepherding this issue. As always, I want to thank the able staff at Perkins for their support and guidance in producing the issue.

In this issue, our theme is Challenge and Innovation: Keeping Braille Accessible and Relevant. You will find articles that follow up on the very successful Braille21 World Congress, which was held in Germany in September, 2011. We are very pleased to focus on braille, as the conversation on its place continues to be discussed more broadly. While we all embrace technology, we believe that technology is a tool to further enhance the medium of communication for persons who are blind.

At a personal level, I simply speak of braille as the medium to provide one with instant, personal, and independent information and access. “Instant” because the touch of those dots directly provide the information of language, spelling, and information through our fingers in any environment. “Personal”, because the information is not transmitted by someone or something, and is not likely to be “overheard” or copied. Finally, “independent”, because the user can access the information when and where it is wanted. The case for braille as an independent tool for communication could not be stronger; coupled with the benefits of technology it could not be more needed.

In the following pages, several articles will discuss braille from many perspectives; ranging from organizing national councils to develop standards, to appealing for the right to read through braille access, to breaking what is being called the “book famine”, to the role of technology in the conversation to “revitalize” braille, and a discussion on the future of braille in individual lives. This is an exciting period, as we try to merge the old with the new. We are working to make a tool that has stood for more than two hundred years relevant in the twenty-first century. Most importantly, we are working to balance independence through the advantages of the use of tools that can provide us with “easy access”.

I encourage readers to write to the editor. I will like to put into the magazine a section on “letters to the editor”. I also welcome your suggestions on other interesting ideas to support the readership of The Educator.

Dr. W. Aubrey Webson
A meeting of the Executive Committee of ICEVI was held at Leipzig, Germany on 1st and 2nd October 2011. Some of the highlights of the discussions are as follows:

F The good practices of the Global Campaign on Education for All Children with Visual Impairment (EFA-VI) being implemented in the focus countries need to be documented for the purpose of information dissemination.

F It was also suggested that ICEVI should develop guidelines for inclusive education.

F The members recommended that EFA-VI Campaign should be linked to larger generic initiatives on inclusion and also with disability related global initiatives.

F Regional strategies for ICEVI activities should be developed for all regions in a phased manner.

F It was recommended that a consortium of organizations at the regional level may be promoted to serve as regional resource centres / centres of excellence for the expansion of EFA-VI Campaign.

F In terms of governance, the ICEVI Executive Committee recommended that a smaller group of representatives from each region may be invited for the General Assembly once in 4 years to plan the regional activities provided each region organizes regional conferences or sub-regional activities in such a way that the members attending the global General Assembly are properly selected to make an impact on ICEVI activities in the region.

F As 2015 is going to be the year of review of the Global EFA initiative, the executive committee of ICEVI suggested that the Vision Alliance may organize a joint event in 2013 to formulate necessary statements and recommendations that can be presented for consideration at high level meetings expected to be organized by international organisations in that year.

F The need for increasing the membership fee for the International Partner Members of ICEVI was also discussed.
The Global Campaign on Education for All Children with Visual Impairment (EFA-VI) being implemented by the ICEVI acting in partnership with the World Blind Union is currently underway in 12 focus countries including Ecuador, El Salvador, Ethiopia, Fiji, Honduras, Mozambique, Nepal, Nicaragua, Pakistan, Paraguay, The Dominican Republic, and Vietnam. A research study pertaining to inclusion of children with visual impairment was conducted in China that resulted in changes in the policy formulation. The preparations for implementation of the campaign are underway in Burkina Faso, Cambodia, Bolivia and Guatemala.

Data from 11 countries (Ecuador, El Salvador, Ethiopia, Honduras, Mozambique, Nepal, Nicaragua, Pakistan, Paraguay, The Dominican Republic and Vietnam) reveals that 49,102 additional children with visual impairment have been enrolled in schools and 17,479 teachers and parents have been trained in areas such as Low Vision, Early Detection and Assessment, Adapted Learning Materials, Abacus, Braille, Education of Multiply Disabled Visually Impaired, Inclusive Education, Visual Stimulation, Orientation and Mobility, Child Protection Policies, Role of Parents in Education of Children with Visual Impairment, and Activities of Daily Living. The campaign has demonstrated that education for all initiative will become a reality when children with disabilities in general and children with visual impairment are included in the mainstream education system.

### Enrolment Data

<table>
<thead>
<tr>
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<tr>
<td>Ecuador</td>
<td>1566</td>
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<tr>
<td>Ethiopia</td>
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<tr>
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<tr>
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<tr>
<td>Nepal</td>
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<tr>
<td>Nicaragua</td>
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<tr>
<td>Pakistan</td>
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<tr>
<td>Paraguay</td>
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<tr>
<td>Vietnam</td>
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### Capacity Building Programmes

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<tbody>
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<td>Ecuador</td>
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<tr>
<td>El Salvador</td>
<td>92</td>
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<td>Ethiopia</td>
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<td>Honduras</td>
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<td>Mozambique</td>
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<td>Vietnam</td>
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ICEVI-WBU Statement on EFA Initiatives

The International Council for Education of People with Visual Impairment (ICEVI) is a voluntary, non-governmental, non-sectarian global association of individuals and organisations that represent educators of blind and low vision (partially sighted) children and youth throughout the world. The World Blind Union (WBU) is the only organisation entitled to speak on behalf of blind and low vision (partially sighted) persons of the world, representing 161 million blind and visually impaired persons from over 158 countries. Both ICEVI and WBU promote equal access and appropriate quality education in either integrated/inclusive education programmes or at special schools for all visually impaired children and youth so that they can achieve their full potential.

- **ICEVI and WBU, conscious** of the inequalities in educational opportunities for blind and low vision (partially sighted) children and youth, especially in the developing countries where 90% of all children with visual impairment live and where less than 10% of these children currently have access to any type of education;

- **Affirm** the human right of all children who are blind or have low vision;

- **Urge** all governments to include the educational needs of children with visual impairment in their respective National Education Plans for achieving Education for All by 2015;

- **Request** all governments to ensure adequate financial provisions for educating children who are blind or have low vision;

- **Endorse** the concept of child-centred pedagogy and promote context specific educational approaches including that of special and inclusive education;

- **Support** inclusive education as one of the models of service delivery, by ensuring provision of human and material resources such as qualified teachers, Braille books and low vision devices to guarantee true inclusion;

- **Recommend and advocate** alternative forms of education for those who cannot benefit from an inclusive, integrated or special education programme;

- **Encourage** the provision of early detection, early intervention, and pre-school services which include the parents, other family members, and the community in general;

- **Assure** governments of their joint and separate fullest support, especially in terms of advocacy, professional advice, and technical assistance.

The EFA-VI Global Campaign:

Considering the importance to expand educational opportunities, ICEVI and the WBU launched a Global Campaign on Education for All Children with Visual Impairment (EFA-VI) in July 2006.
The Campaign addresses three key Millennium Development Goals:
- achieving universal primary education,
- promoting gender equality and
- developing global partnerships for development.

The Campaign works within the framework of the general and special education system of countries and is focusing attention on awareness and demand creation for education of children with visual impairment. Provision of appropriate support in educational settings and creation of alternative settings to reach out to the unreached are key aspects of the campaign.

The Campaign is implemented at two levels. An Executive Committee chaired by the President of ICEVI and sub-committees on Global Advocacy and Networking, Media and Materials, Programme Review & Monitoring and Resource Mobilization are involved in formulating policies whereas the day-to-day implementation of the campaign is the responsibility of the National Task Forces (NTF). International funding organisations, inter-governmental organisations, corporations and foundations are partners in this global effort to create educational equity for all children with visual impairment.

Our Appeal
More than 60 countries in the Africa and Asia regions have been included under the Fast Track Initiatives of the World Bank and ICEVI and WBU feel strongly that if Millennium Development Goal 2 is to be achieved, the national plans of these countries should necessarily include education of children with disabilities as an integral part of the plans to:
- assure that the needs of disabled children are reflected in all EFA National Plans
- encourage and support capacity building programs for specialized and regular classroom teachers and other human resources
- assure that educational services are inclusive of all children with disabilities and
- provide textbooks and other educational materials that are fully accessible to the learning needs of the child.

The time has come for the EFA Fast Track Initiative and governments of all countries to address the serious discrepancy that exists between the rates of access to education for disabled and non-disabled children and include these children in the mainstream education to make education for all children a true reality.
I would like to wish all ICEVI members and friends a very happy new year.

I am fortunate, because I was taught braille as a very young child and have used it in all aspects of my life. Braille has been key to my success in education, employment and participation in my communities. Unfortunately, this is not the experience of millions of persons who are blind around the world. WBU and ICEVI are dedicated to changing this.

WBU’s World Braille Council, in partnership with the German Central Library for the Blind, planned, organised and conducted the international Braille21 Congress (see the report in this issue). It was a privilege to take part in a congress and witness the creative, innovative and exciting developments being made in Braille. It is inspiring to see the interest and enthusiasm of Braille amongst persons who are blind, educators, developers and producers. I have no doubt Louis Braille would be proud of the way we care for the legacy he created for all of us.

This year we are looking forward to the joint WBU/ICEVI General Assemblies, with the theme: Achieving Our Vision through Empowerment and Partnerships. Between 8-19 November 2012, persons who are blind, those in the educational and rehabilitation sectors, and others will gather at the Imperial Queens Park Hotel in Bangkok, Thailand. Here is a list of the events that will be offered at this international gathering:

- African Union of the Blind General Assembly
- WBU Diversity Forum
- WBU General Assembly
- ICEVI General Assembly
- Education for All Children with Visual Impairment (EFA-VI) Planning Day
- Institutional Development Program (IDP) Annual Meeting

We are very excited about the opportunities this provides to members of ICEVI and WBU. On 15 and 16 November, there will be parallel sessions and workshops on topics of interest and importance to both memberships.

Interested persons will have the opportunity to attend the event of each organisation and a full and interesting social program is being arranged by our local hosts in Thailand.

The planning, hosting and events is being undertaken in partnership with ICEVI, WBU, and with the local hosts in Thailand led by the Thai Association of the Blind (TAB). Information and details of the program, registration and logistics can be found at www.wbu-icevi2012.org.

I look forward to meeting many of you in November in Bangkok.
At its 7th General Assembly in 2008, the World Blind Union revived and strengthened the World Braille Council. Its objective is to support braille literacy around the world, and a detailed list of its initiatives and goals is included in WBU’s quadrennial Work-Plan (2009-2012). The World Braille Council strongly advocates that it be recognized as a permanent entity within the WBU Constitution.

The Council has a truly international character. In addition to user-representatives from all over the world, it has representatives from six regional unions of the World Blind Union, ICEVI, and other prominent international organizations concerned with braille development, production, and education for people who are blind. The top leadership of the World Blind Union—the President and first Vice President--have been lending their valued support. Thus, the Council brings together the collective wisdom and experience of a galaxy of braille specialists and users from all over the world, with J.L. Kaul (India) as its leader.

The Council has held three meetings since 2009, most recently in Leipzig in October 2011, following the Braille21 Congress. During these few months, the Council has been able to undertake a number of tasks and to produce several important outcomes:

**World Braille Congress**
The Braille21 Congress met in Leipzig in September, 2011. WBU President Maryanne Diamond was in the Chair, and the Programme Committee was led by Pete Osborne. With more than 400 delegates from 50 countries participating, the Congress was a great success. If there is one statement coming from the conference, it is that more braille be available, accessible, and affordable internationally.

**Braille Award**
The World Blind Union Braille21 Award for innovation was awarded to Björn Westling for the Portable Embosser Format device. Find out more at [www.pef-format.org](http://www.pef-format.org).

**Directory of Braille Libraries**
A list of 127 braille libraries in 69 countries has been drawn up by Dr. Thomas Kahlisch, Director of the German Central Library (DZB). This directory will be posted on the WBU website.

**Braille Authorities**
A new Braille Authority has been established in Ghana.

The International Council on English Braille (ICEB) made presentations on the creation of Braille Authorities at the 2011 Africa Forum.
held in Accra, and at Braille21 in Leipzig (see M. Schnackenberg’s article in this issue). The Leipzig paper has been endorsed by the World Braille Council to serve as the initial reference document on the subject.

**Braille Codes and Standards**

The World Braille Council seeks to work with ICEVI in promoting braille, especially in developing countries. The 3rd edition of World Braille Usage will be a useful tool, and may now gain momentum with addition of new support from Perkins School for the Blind.

Pete Osborne and Tetsuji Tanaka represent the Council on the ISO committee that is working on standards for braille signage and consumer products. Otto Prytz from Norway has been nominated as the WBU Liaison person for the Commission.

Under the leadership of Maryanne Diamond, the WBU and the Council are working to further WBU Copyright Treaty, which will facilitate cross-border exchange of reading material.

**Unification of Braille Notations**

The Technical Committee, chaired by Otto Prytz, endorses language-specific computer braille symbols. It further holds that mathematics and science braille notations have to be worked out primarily within language groups. The Council also recommends adoption of the latest braille version of international phonetic alphabets, developed by Dr. Robert Englebretson of the USA.

**Technology and Accessibility of Braille**

WBC holds that braille technologies like Refreshable Braille Displays should be made affordable, and specific user requirements be clearly identified.

**Bibliography on Research in Braille**

The Council, through the initiative of Dr. Diane P. Wormsley, has compiled a comprehensive bibliography of research documents on braille teaching, braille production and related issues covering the period from 1912 to the present. The bibliography currently has 135 pages with about 700 entries. It lists books and articles titles and key words, and will include languages other than English.

The links for both the key word list and the title list (as of September 2011) are below. Although they are still in draft form, feel free to use them to locate resources.

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**Key Word List:**


**Comprehensive Bibliography:**


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The Educator  |  Vol. XXV, Issue 2  |  January 2012
It is fitting that we are gathered here in Leipzig to talk about braille. Not only is this the home of one of the largest braille libraries in the world but this is also a city where the publishing of books is a core industry that goes back for centuries.

But why did we all come here? More than four hundred people have chosen to travel, some traveling great distances. Are we all here just because we love braille? Or maybe is it because we think there are things about braille that we don’t know and we want to learn? Maybe we want a chance to influence the future of braille? Well, if that’s your reason for being here you might just get your wish.

During the next few days we will hear about innovations in braille, new braille codes, new braille devices, new ways that braille can be used, and new concepts in braille that are just being contemplated. I am sure that all of you who have come to this conference will learn something that you didn’t know before; learn something that you can go home with and use; learn something significant about braille.

My experience illustrates the story of braille since the mid-twentieth century. I was born in 1952 in Florida, a state in the southeastern part of the United States. This was the same year that the 150th anniversary of Louis Braille’s birth was celebrated and his body was moved to the Pantheon in Paris. By this point in time, braille as a reading medium for persons who were blind was not questioned. Some think of it as braille’s “golden age.” I’m not sure how golden it was but braille was certainly the way that children who are blind in the United States were taught to read.

When I was five years old, I attended the school for the blind in St. Augustine, Florida. We were taught braille using pegboards, and muffin tins, and eventually with dots on paper. We learned to write braille on a Perkins brailler. At Christmastime of my first year, right before going home for the holiday, I was given a braille slate and shown how to use it. For me, this was a perfect time to receive a slate and I suspect that it was this event that began my lifelong love affair with the braille slate. I went home to my sighted parents and my sighted
brothers and was able to show them something that I had learned that they could understand. “Look at me! I can read, I can write, and I can read what I have written.”

In January 1960 I started attending public school in Massachusetts, a state in the northeastern part of the United States. There, I had a braille version of every book that my classmates had in print. These were books made of paper with words, and sentences of words, and pages of words, and chapters of words. The print books might have had a few photographs, but mostly these could safely be ignored with little problem and my braille books were essentially the same ones that the other kids were reading.

I had a teacher who understood a great deal about what children with blindness needed to know. She taught us braille. When we had an assignment in class, we wrote it in braille and the braille teacher handwrote it in print for the classroom teacher—mistakes and all.

We did have a braille library. We had three shelves of books that we could pick from. By the fourth grade, I had read all of them.

When I was beginning the eighth grade, I returned to Florida and attended public school. This time I had no braille teacher. The classroom teachers didn’t know any more about teaching a child who was blind than I as a twelve-year-old could tell them. But I did have a group of dedicated transcribers who created my textbooks. Many times one of my parents would pick up a volume in the evening from a transcriber and I had a test on the material the next morning. But for the most part, I did have braille books.

At this time Florida did not have a braille library. Our library service came from the neighboring state of Georgia. The nice librarians would send books they thought I might like, but in those days we didn’t have catalogs or toll-free telephone numbers to call the library and talk about books with the librarians.

When I was fourteen we visited Atlanta, where the library was located, and I persuaded my family to visit the braille library. I was so excited because I was going to see many, many books in one place. However, the library’s policy prohibited visitors in the collection area. Well, my father didn’t think this was reasonable. He started by calling the library’s administrator and ended up talking to the Governor’s office. I never got to see any books, and I remember it as one of the most embarrassing, humiliating days of my childhood.

I continued to use braille through my post-secondary education but more and more audiobooks began to creep into my life. My dedicated group of transcribers stayed with me through my undergraduate years and they agreed to braille math, science, and foreign language books. For everything else, I had to use books on tape.

My relationship with libraries remained a bit tenuous. I borrowed a few braille books when there was a school holiday but I didn’t actually try to visit one.
I received a PhD in clinical psychology in 1979 and taught undergraduates for a couple of years at a community college in New York City. In 1981 I learned of a job at the National Library Service for the Blind and Physically Handicapped at the Library of Congress, representing consumers in the national library program. Well, I certainly thought consumers needed representation and I cared a great deal about reading and access and braille so this seemed like the perfect job for me. I guess it was, because last June I celebrated thirty years of working for the Library of Congress.

Braille has continued to be an important part of my life. Working in a library, I have many opportunities to be a supporter of braille—for braille in libraries, for opportunities to learn braille, and for innovations in the way braille is produced, taught, stored, and distributed.

There have been many changes in braille during this time. In the early 1990s an effort to unify braille was begun in the United States. In 1993 this effort was internationalized. In 2005, Unified English Braille, or UEB as the revised code came to be called, was adopted in South Africa and Australia. Today it is used by six out of the seven member countries of the International Council on English Braille.

So much has changed in our lives. More children with blindness attend public schools where there is no teacher who knows braille. In education today some students have the luxury of reading books that have been prepared by transcribers with expert knowledge of braille. Some students have books that have been prepared by teachers’ aids with little knowledge of braille, and others have only electronic translations. Books are not the same, education is not the same, libraries are not the same. And the use of braille in school, whether it’s a school for the blind or a public school, is not the same. This year in Washington, D.C., every child who is blind is receiving an iPad and if they are a braille reader, a BrailleNote. And they are getting all their textbooks from a source that scans them and runs them through an electronic process. The books are never touched by human hands.

Our challenge today is to integrate the automatic generation of braille with the braille codes and with the devices we use. In 1981, the same year that I started working at the Library of Congress, I got my first braille display. It was a VersaBraille with 20 braille cells and 1k of memory and we all thought it was the most magic machine we had ever seen. Since then I have used numerous refreshable-braille devices. Most of them have been from the German manufacturer, Baum Retec. The displays are terrific—I find them to be very valuable tools. But is reading a hard-copy braille page the same as reading a page with an electronic braille display? After all these years, I am still not sure.

And what of libraries? More and more braille is being distributed electronically. These electronic volumes can be transmitted instantly and can be stored on tiny devices. They are
reducing production costs and solving very serious storage problems being faced by braille libraries. This is fine for those of us in developed countries with easy access to the Internet and braille displays. But many people who are blind in the United States do not have a braille display, and in the global blind population, only a fraction of people have a braille display. Without lower cost and rugged refreshable-braille devices, how will braille from libraries in electronic form benefit the larger blind population?

All of us braille readers say that we couldn’t have done it without braille and this is so very, very true. But the number of braille users is dropping. For many years, fewer children were taught braille in school and now there are continuous struggles to insist that we need braille, braille is valuable; it is part of our soul.

The need for change in braille is with us today more than ever before. Braille production costs are rising at an alarming rate. The cost of putting braille books on shelves in libraries is skyrocketing. Print is changing rapidly. Textbooks for children are visually complex—there are new characters, icons, layouts, and fonts—all used to convey meaning. The boundaries between “technical” materials and everyday materials have blurred considerably.

I think that one solution is for us to focus on what braille is really best for. Braille is good for browsing, as in skimming through a conference program. Braille gives us privacy when reading our bank statements and personal documents. Braille is good for labeling medicinal and other kinds of packaging. These uses must be preserved and encouraged.

Are the tools we have today really meeting our needs? Our little electronic notetakers are very valuable, but not everyone in the world can have these. I believe that, even with all the braille technology that we have, there are still basic tools of braille that we do not have. Despite very creative efforts to make functional braille slates, I believe we still need a braille-writing device that is convenient and would allow its user to write braille that can be read immediately. We need a device that would let us easily apply braille to objects to make the process of labeling much easier. I have thought of this as sort of a glue gun that would deposit dots in the pattern of a braille cell. (I have suggested this idea to several developers but I think the idea of putting glue guns in the hands of people who are blind is a bit frightening to them!).

Education is more and more based on technology. Maybe one day this will mean that every blind child in the world will learn braille. Braille libraries are becoming electronic. Maybe one day, every book will be available to every blind person in the world. Change is healthy. It is change that will make these things possible. We have come together at this conference to learn about the possibilities and to celebrate the changes that will revitalize braille and keep it alive for many centuries to come.
In this paper, I question some of the assumptions about the role of braille in education for students who are blind. To avoid being misunderstood, I want to emphasise that I am not setting out a uniform, or standardised proposal for all children.

But we do need to set out with a default position which attempts to reflect majority behaviour. So, for example, a computer default setting attempts to reflect what the majority of users want; it is only a starting point and it can be altered. The policy equivalent of a default setting is usually described as a “minimum entitlements.” In the environment of many competing entitlements, that can be problematic, so I will return to that issue later.

My default position on the role of braille in the education of children who are blind is that all children should learn to read uncontracted braille in their own first language. This may seem like a very poor provision to those in educational institutions where children who are blind are taught. In such schools the default position calls for reading contracted braille and writing braille, sometimes in more than one language. But policy makers and educators need to re-examine this default. We must consider whether it meets the needs of individual children, and we must consider it in the context of the resources available for the education of all children who are blind.

Let us begin with the needs of individual children. I believe that the traditional default: that all children who are blind should learn to read and to write contracted braille, is not in the interests of most children. For a start, an increasing number of children suffer from additional disabilities which hamper their progress more than their blindness. Next, many will never, because of a lack of aptitude or capability, enter a secondary or high school where contracted braille is necessary. Finally, and critically, all children who are blind must pursue three curricula. In addition to the standard curriculum of their sighted peers, they must additionally pursue a communications and mobility curriculum, and the social skills curriculum which teaches them to operate effectively with their sighted peers. Bearing in mind the demands on their time, energy, and attention, learning contracted braille cannot continue to be the default position. Spending precious time on a subject has to be justified in comparison with all other learning in the context of life chances and career prospects.
I have seen ten-year-old girls who are totally blind in Tanzania. They are destined, if they are lucky enough to mirror their peers, to raise families and work in the fields. They have no prospect of ever reading a braille book, so why are they learning Swahili braille or contracted English braille? Could their time not have been better spent learning about rearing children, market gardening, and contributing to village life, so that they are valued rather than considered as a drag on the community?

As for learning to write braille, those generally thought to require this skill are precisely the same students who will be communicating with their sighted peers using print output devices. If the output device can render the same files in synthetic speech, then the writer can use the device for reference. Another use of braille is creating labels, but for many the cost of a recordable label device may be cheaper than conventional braille.

Let us now consider the value of teaching contracted braille in the context of scarce resources and minimum entitlement. The default position states that it is more valuable for children to learn braille, instead of accessing all data through real audio or synthetic speech—a position which I share! But that position may properly be challenged if its realisation by a minority of children militates against the majority. In many developing countries, for example, it will soon be much cheaper to give children who are blind mobile phones with text-to-speech and speech-to-text functions. Nokia/Microsoft has just launched the Asha range of smart phones specifically designed for developing countries. Educators may quite properly argue that text on a mobile phone is less satisfactory than hard-copy braille. But policy makers might have to choose between a quality experience for a few versus basic provision for the many.

The argument most used in this context is that new money will be needed to expand provision of digital devices. But this overlooks the high cost of operating braille printing houses, which provide an elite service. Might it not be better to provide accessibility to text through digital devices for the many, rather than hard copy braille for the few? When I speak at conferences I frequently hear people championing services for the blind in rural areas, but when I mention the possible necessity of paying for them by sacrificing high cost urban services, they fall silent.

One of the strategies which will make much of this argument easier to handle is the development of a cheap refreshable braille display. The DAISY Consortium has recently launched a global initiative to make this possible. But, in the meantime, we still need to face up to the hard questions I pose here in order to treat children who are blind rationally and fairly.
Books for Children
Who Struggle with Braille

Marion Ripley
ClearVision Children’s Braille Library, UK

Introduction

The ClearVision library was set up in 1986 to create braille books for young learners that they can share with sighted family, friends and classmates. The collection started with just a few titles for children at Linden Lodge School, but now has over 13,000 books, which are lent by post to over a thousand borrowers all over the UK. All these books contain both print and braille so that the books can be shared by print-and braille-reading children and adults.

Over the years it has become apparent that many children have difficulty learning braille. We are often asked for books for children whose reading age is lower than their actual age, and we stock a good selection of books which meet this need.

Recent studies by Miriam Bindman at the Developmental Vision Service at Great Ormond Street Hospital suggest that most young braille readers have a reading age lower than their actual age. In this study (not yet published), the reading abilities of 78 braille-learners aged 4-11 were assessed. Only 17% of nine-year-olds learning braille were described as fluent braille readers. 42% were described as fluent braille readers at the age of eleven.

Why do children find braille difficult to learn?

Children with a visual impairment in the UK may find braille difficult for a number of reasons.

Additional disabilities

Figures from the UK Institute of Child Health show that over 70% of children in the UK with little or no sight have another significant disability. These may include moderate or severe learning difficulties, cerebral palsy, hearing impairment, and/or attention deficit disorders. The higher survival rate of very premature babies has resulted in increased numbers of children with multiple disabilities. Children who are blind with no additional disabilities are now in a minority.

Switching to braille after having learned to read print

Some children have degenerating eye conditions or lose their sight suddenly when they have already learned to read print. Learning to read all over again can result in resentment and a lack of motivation.
Lack of support at home
Some children lack an encouraging home background. Some parents are specifically resistant to the idea of their child learning braille, whilst others are generally unwilling or unable to provide help and support for their child’s education.

Lack of role models
Some children learning braille in mainstream schools will not know any competent touch reader who can act as a role model. No child likes to feel different from his or her classmates. Unless the situation is sensitively handled, he or she may be reluctant to learn braille when all the other children are learning to read print.

Lack of time for braille tuition
Whilst integration into mainstream schools has some undisputed advantages, the situation of a young braille learner today is very different to the experience of braille learners in the past. In special schools for the blind, a lot of time could be devoted to the teaching of braille. Nowadays the majority of visually impaired children are taught in mainstream schools and spend most of their time in lessons with children who are sighted. There is not always time for the intensive braille tuition needed to overcome any difficulties and to build real confidence in reading. It is normal to have just two and a half hours of braille tuition a week. When pupils are withdrawn from the class for braille tuition they miss out on what the rest of the class is doing.

Lack of professional support for braille teachers
Many braille teachers do not work with enough young braillists to gain experience and to maintain their braille skills. There are estimated to be about 500 children aged 5-11 learning braille in the UK. They are spread around hundreds of different schools in different areas. This means that a qualified teacher of visually impaired children may work for several years without having the opportunity to teach braille. Over the years, teachers may well forget some of the braille learned during their training and lose confidence in their ability to teach contracted braille. In the Great Ormond Street Hospital study, 29.5% of the 53 qualified teachers of the visually impaired studied described their braille skills as “not very proficient” or “rusty.”

Lack of incentive
Many of the old incentives to learning braille are unconvincing now that audio is so widely and so swiftly available. Why would young readers wait months or years for a bestseller to appear in braille when it can be so easily downloaded and listened to? Even labelling can now be achieved with an electronic Penfriend from RNIB. Many competent adult braille readers will admit that they rarely, if ever, read a multi-volume braille book for pleasure.
There is no need to explain to this audience why learning braille is so important for children with little or no sight. And some children do love reading and fully appreciate the joys of sitting down with a good long braille book. But while we would all agree that braille is invaluable in so many ways, we can no longer say that it is an absolute necessity for people who have access to the latest technology.

**What can we do to make reading braille easier?**
The ClearVision library cannot hope to remove all these obstacles to learning braille. We can only do our utmost to respond to the changing needs of children with visual impairment by developing resources to help them progress as far as they can along the road to literacy. This has implications for formatting, for the support we provide for parents and teachers, and for the selection of books we add to our library.

**The format**
Traditionally uncontracted (grade 1) braille has been taught in the UK only as a step towards contracted (grade 2) braille. In the last few years there have been moves towards legitimising uncontracted braille for those unable or unwilling to learn contracted braille. The Royal National Institute of Blind People now produces most children's materials in both formats. A teacher at a meeting a few years ago memorably said ‘For some children, contracted braille is a mountain too high to climb.’ The teaching of contracted braille to less able readers is a controversial topic and currently it is left to individual teachers to decide what is best for each child. The ClearVision library has always stocked books for younger children in both contracted and uncontracted braille and is now adding longer books for newly fluent readers who have not learned contracted braille.

Where possible, we use double-line spacing, as many children find it hard to track back to the start of the next line.

All our books have the text in print as well as braille. Our interleaved books look like mainstream children’s books, with print and pictures exactly as published, but with the addition of braille on clear plastic sheets. This enables family members to read along with the child who is learning braille even if, as is usually the case, they do not themselves know braille.

The ClearVision library also stocks novelty board books for infants, with the braille text stuck to the page on clear plastic labels. This enables the youngest children to get used to finding the braille on the page and feeling the dots long before they are taught to read it. As well as familiarising the young child, this also serves to get the families accustomed to the idea of braille.
Support materials

To encourage parents, grandparents, classroom assistants and others to learn the basics of braille, we have produced a short and visually appealing puzzle book called Crack the Code. This booklet introduces the braille alphabet, numbers, and punctuation through jokes and puzzles. We hope that this knowledge of the basics of braille will enable people to better support their child's braille learning. Print copies are available free of charge and the book is downloadable from the News page at www.clearvisionproject.org. We are now developing some simple guidelines for sighted parents on how to help their child learn to read braille.

Providing books children want to read

For children in the early stages we have a collection of over a thousand hand-made books with simple tactile illustrations using real objects, textures, fabrics, and embossing techniques. The text provides an introduction to braille, whilst the illustrations encourage tactile discrimination skills. The books are also great fun.

Young braille readers want to read what their sighted classmates are reading. They should have access to a wide variety of currently popular books, in good condition and looking as much as possible like a print book.

For children who find braille difficult, we try to make sure that we have lots of age-appropriate, attractive, and recently published books without too much text.

We are building up a stock of books which are age-appropriate for older children who are not confident readers. These are sometimes described as ‘high-interest, low-reading-age’ books.

For children who lack the cognitive ability or the fine motor skills to learn braille, we stock books in an alternative tactile system called Moon. Moon has been used in the UK and a very few other countries since it was first developed by Dr William Moon in 1845 (see www.moonliteracy.org.uk). Whereas braille is made up of patterns of dots, Moon uses lines and curves, similar to print.

For various reasons many children find braille difficult, embarrassing, boring and/or unnecessary. We must rise to the challenge of providing entertaining and appropriate materials for these children so that they can reach their full potential in literacy and start to enjoy reading braille.
In this paper I will address three things. Firstly, why there is a need for an international copyright treaty and what it should contain. Secondly, progress to date on getting such a treaty. Finally, what this campaign means for the print disability community.

The latest WHO figures on blindness and low vision released in January 2011 tell us there are 285 million persons who are blind or have low vision in the world. Extend this to print-disabled people and you have an even greater number of people who cannot read a conventional book, magazine or website. We believe that less than 5% of published works are accessible in highly developed countries. That figures falls to only 1% in the developing world.

As you know, copyright law is national law. Books legally created in alternate formats in one country cannot be shared with another country. Some books are converted into an alternate format in the same language but in more than one country. Often this redundant work is done by organisations which have limited resources. Changing the copyright restrictions that prohibit sharing of alternate-format works across national boundaries would dramatically increase access to books for people who are print-disabled.

The foundation of our campaign is the UN Convention on the Rights of Persons with Disabilities and its Optional Protocol, adopted in 2006. It is a human rights instrument with an explicit, social development dimension. It asserts that all persons with all types of disabilities must enjoy all human rights and fundamental freedoms. It identifies areas where adaptations are needed to allow persons with disabilities to effectively exercise these rights. It also reaffirms disabled people’s rights in areas where these have often been violated, and gives a basis upon which they can be reinforced.

Article 21 of the Convention addresses “Freedom of expression and opinion, and access to information”: “… Parties shall take all appropriate measures to ensure that persons with disabilities can exercise the right to freedom of expression and opinion, including the freedom to seek, receive and impart information and ideas on an equal basis with others and through all forms of communication of their choice […]” (United Nations).
If this ideal is to be realised, there is a huge task ahead for all of us.

The World Intellectual Property Organisation (WIPO) makes treaties and other international laws on intellectual property rights, such as copyright and patents. The World Blind Union has had representation at WIPO for many years. Since 1985, WBU has been asking WIPO and UNESCO for a legally binding instrument to address the lack of access to books for print-disabled people.

In May 2009, Brazil, Ecuador and Paraguay tabled a proposal for a treaty at the WIPO Standing Committee on Copyright and Related Rights (SCCR). This has become known as the WBU Treaty, due to our involvement in its drafting.

The treaty proposal would:

- make it legal for print-disabled individuals and specialist organisations to make accessible copies of published works in all countries which sign the treaty;
- make it legal for accessible books to be sent internationally without permission from publishers;
- prevent contracts with publishers from undermining copyright exceptions for print disabled people (currently they sometimes do);
- maintain respect for copyright law: it is not an attack on publishers!

Progress on the International Copyright Treaty

The WIPO Standing Committee on Copyright and Related Rights (SCCR) meets twice a year. Thanks to WBU's previous lobbying, SCCR22, held in June, 2011, was especially extended by three days to deal with calls to devise a “books without borders” treaty. A strong WBU team from five continents participated actively in the meeting.

The main achievement in the June and November 2011 meetings was that several main groups of countries in the Committee (EU, USA, Latin America, and Africa) devised a single text to serve as a basis for a new law. (World Intellectual Property Organization). However, there is still disagreement on the text that establishes “a basic proposal for an international legal instrument for limitations and exceptions for persons with print and other reading disabilities”.

The EU, USA and a few other rich countries would like the text to turn into “soft” law. Most other countries favour a treaty. The difference between the two is significant: a soft law is merely a WIPO recommendation, while a treaty is binding. This is akin to the difference between the UN's Standard Rules on Disability and its Disability Convention. The Standard Rules had no significant impact; the Convention is already being taken seriously.
The World Blind Union calls for the text to become a treaty. We maintain that print-disabled people should not have a second-class solution.

In 2009, publisher associations and other “rights holders” offered a counter-proposal known as the “WIPO Stakeholder Platform”, which created voluntary roundtable discussions instead of binding treaties. This Platform was an attempt to fend off a binding treaty. WBU agreed to participate in the Platform nonetheless because we have long wanted to find agreement with rights holders on a licensing regime that will complement the WIPO treaty. Additionally, we need to work with the industry to ensure that they use technology that makes books accessible.

Publishers have pointed to the Stakeholder Platform and its roundtable discussions as evidence that the treaty was not necessary. They have argued that voluntary cooperation is ultimately more practical and swift. However, it is the stakeholders’ opposition to the treaty that has slowed the entire process down for years. They repeatedly opposed our calls for international cooperation, proposing voluntary measures only when we began advocating for a formal treaty.

I think the Stakeholder Platform at WIPO has been successful in detracting from our calls for a treaty. In view of the rights holders’ unwillingness to accept binding legal norms that assure the rights of people with print disabilities, the WBU withdrew from the Stakeholder Platform initiatives. This decision was not taken lightly.

Though publisher lobbyists in Geneva oppose our treaty, we are confident that the new law we are pushing for will not undermine the businesses they speak for.

The new law would only be used in cases where publishers do not sell accessible books, and we would take care to ensure only bona fide recipients benefit from it. As such publishers would not lose possible commercial profits, whilst print disabled people would gain access to hundreds of thousands more books.

What an International Copyright Means for Readers

Finally, I said I would talk about the impact this treaty, if implemented, would immediately have for millions of visually impaired readers. Let me give an example. In Spain, ONCE, the national organisation of people who are blind, holds over 100,000 titles in accessible formats. In Argentina, Tiflolibros holds over 50,000 titles in accessible formats. Most other Spanish speaking countries have a few thousand accessible titles, at best. These two organisations would like to share and exchange their titles with all visually impaired readers who live in the nineteen Spanish speaking countries across Latin America. This they cannot currently do because of copyright, but the proposed treaty would make this possible.
Similarly, there are collections totalling hundreds of thousands in the USA, Canada, the UK, Australia and New Zealand. Literally millions of print disabled readers in the 60 countries where English is spoken could benefit from having access to these collections.

France, Canada, Belgium, Luxemburg and Switzerland could, similarly, share their collections of French titles with the book-starved print disabled in Francophone African countries; Brazil and Portugal could also share with Portuguese speaking countries like Angola, Mozambique, East Timor and Macau; all other language groups including Arabic, Russian and Chinese could do the same. Again current copyright forbids this but the treaty would make it possible.

I want to finish with a few observations of how things might go moving forward.

Although November’s SCCR23 failed to come to agreement on the text of the law, we are still hopeful that we can turn it into a treaty by the end of 2012.

Access to information is being discussed and considered at the highest levels in the UN and at the international level. This is a once in a life time opportunity. We cannot let this pass and we cannot accept a system which requires a voluntary approach.

We must achieve a treaty that removes the copyright barriers that aggravate the “book famine”. A treaty that translates into copyright law the rights described in the UN Disability Convention. A treaty that shows that countries around the world care whether people who are blind have the means to read, not just the theoretical right to do so.

We need a treaty that helps us to be fully included in today’s information rich world. That’s surely something worth fighting for.


What is a Braille Authority and why is it important?

All over the world, advocates are considering ways to promote literacy through braille for people who are blind in their countries. There is much to consider in this undertaking: choices of codes, promotion (advocacy and marketing), teaching, production, distribution, and more.

One approach is to set up a Braille Authority to act as a national focus for braille. The International Council on English Braille (ICEB) has prepared this paper to assist workers who want to develop Braille Authorities in their own countries.

ICEB has seven member countries: Australia, Canada, New Zealand, Nigeria, South Africa, the United Kingdom and the United States of America. Each ICEB member has a Braille Authority that makes decisions about braille. Each authority is differently governed and structured, reflecting the culture of each country. There is no single “right way” to set up a Braille Authority; you should set up a structure to meet your country’s needs.

The Braille Authorities and the ICEB itself all share one unifying feature: they bring together readers, teachers, and producers of braille, with a common desire to promote literacy through braille for all people who are blind.

There are many complex decisions to be addressed in this work. A Braille Authority is the forum for deciding the following questions:

- what braille codes will be used in the country;
- what codes should be used for multiple languages in a country;
- whether the codes should be contracted or uncontracted;
- which braille formats, as distinct from codes, should be used;
- what standards for tactile graphics, signage, and other forms of tactile communication are appropriate;
- how to provide a unified national focus for literacy through braille.
Braille Authorities do not have actual “authority” over braille in their countries. There is no legislation in any ICEB country that gives legal enforcement to the decisions made by their Braille Authorities. They succeed in their work because they include and involve all stakeholders in braille in their decisions.

**First steps**

The first task in establishing a national Braille Authority is to make guiding decisions that help focus your work and organize yourselves.

First, we suggest that you decide on the key audience that you will serve. Within the blindness community, there are three audiences: children, adults with lifelong blindness, and newly blinded adults. You may decide to serve one, two, or all three audiences.

Second, you should consider the purposes, goals and objectives of the Braille Authority.

Third, you should consider what type of membership structure would best fulfill those purposes. Who are the stakeholders in braille in your country?

Finally, work out what type of governance, what formal structure, would best suit your audience, purposes and membership?

**Fourteen questions to consider**

We have looked at all the constitutions, rules, and bylaws of the seven members of ICEB. We have identified several themes and drawn up 14 questions for you to consider:

**Audience**

1. If you want to focus on one or more audiences, will you give one of them priority: children, adults with lifelong blindness, or newly blinded adults?

**Purposes**

2. What purposes or goals or objectives should the authority have? What would best meet your needs?

*Examples might include:*

- set standards for braille, that is, the codes to be used and taught in your country;
- set standards for tactile graphics, signage, and other forms of tactile communication;
- develop guidelines for the formatting of braille books and documents;
- accredit transcribers with a braille proficiency certificate following the successful passing of an examination;
- inform readers, teachers and producers about changes to braille codes;
- advise producer organisations and individuals about the production of braille;
- monitor standards of braille production within your country and provide feedback to braille producers;
- advise on the storage and distribution of braille materials;
- monitor and promote better access to qualified teaching in braille for children and adults;
- promote (advocate for, market) literacy through braille, particularly in educational pursuits;
- monitor the availability of books in braille, particularly textbooks;
- promote equal access with sighted citizens to community information;
- undertake research into the uses of braille and its codes in your country;
- monitor developments in braille internationally and interact with similar bodies elsewhere.

3. Should the authority consider more than one language for your country, or should you have one authority for each language?

Braille codes used for each language in your country should work well together and be understood by everyone who needs to produce, teach or read them. Examples are Braille SA, the South African Braille Authority, which sets code standards for English, Afrikaans, and nine indigenous African languages.

The National Braille Council of Nigeria sets standards for three languages in addition to English.

4. Should you write vision, mission and values statements?

Vision and mission statements are required by potential funders and explain the reason for the Braille Authority to exist. They should be just a few words in length. A values (beliefs) statement is a brief set of guiding principles about how you treat each other and all the stakeholders involved in the work of the authority.

Membership

5. Having agreed on the audience for and purposes of the Braille Authority, who would best understand your audience and purposes? Should the membership be individuals involved in braille work? Organisations working in braille production? Professional teaching associations? Consumer groups of braille readers? Or a mixture of individuals and organisations?
6. If the membership is of organisations, which ones should be represented on the authority? Types of organisations might include:
- special education units in ministries, government agencies, institutions, parastatals (companies or agencies owned or controlled wholly or partly by the government), etc.;
- school examination authorities;
- special schools for the blind;
- regular schools that have a policy of enrolling students who are blind;
- groups representing parents of children who are blind or have low vision;
- braille producers;
- blindness agencies or organisations;
- libraries that circulate braille books;
- consumer groups involving adult readers of braille;
- honorary members, such as individuals who are very experienced in the braille field but no longer work in a relevant body.

7. What qualifications, skills or experience are important for individuals who serve on the authority? Examples might include:
- ability to read braille by touch or by sight;
- knowledge of codes, for example, languages, music braille, maths notation, Standard English Braille, English Braille American Edition, Unified English Braille;
- skill in the production of braille, including knowledge of codes;
- skill in the production of tactile graphics;
- experience in teaching braille to children or adults;
- experience in working with people who are deafblind.

8. Should a percentage (perhaps the majority) of individual members be touch-readers of braille who are blind?

9. Should the authority concern itself with braille only, or should it be a part of a larger group that supervises all accessible formats for the country?

10. What should the name of the authority be? Should the name reflect multiple languages in your country?

11. How many members should the authority have? Should it have an executive group to carry out routine work between meetings of the authority? How many office holders should it have?
12. How often should the authority meet? Usually an annual meeting is required to receive an annual report from the chairman, a financial report from the treasurer and to elect office holders for the following year.

13. To keep up to date with braille developments in other countries, which other Braille Authorities should your organisation join?

14. Which legal structure for the Braille Authority would best suit your country? Should the authority be an independent organisation? Or should it be linked to your government, perhaps your department of education or ministry of culture? Your country may have a model constitution or rules or bylaws that you can use as a basis for the rules of your authority.

We suggest you write a simple constitution which you formally register with your government and a set of more detailed bylaws or guidelines about how to run the authority.

**Conclusion**

Remember that there is no single way to set up a Braille Authority; a successful structure meets the needs that exist in your country. The more inclusive and open and transparent Braille Authorities are, the more they succeed in promoting the use of braille, promoting literacy and numeracy, and in introducing change to keep braille relevant in today's complex environment.

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**New Regional Coordinator for EFA-VI Global Campaign**

Mr. Martin Osangiri Okiyo has been selected as the new Regional Coordinator of EFA-VI for the Africa Region. The EFA-VI Regional Secretariat is located at the African Union of the Blind, Nairobi. A selection committee consisting of Alimata Abdul Karimu, Executive Director, AFUB, Simon Bush, Director for Advocacy and African Alliances, Sightsavers, Wilfred Maina, ICEVI Africa Regional Chairperson and M.N.G. Mani, Secretary General, ICEVI interviewed the 5 short-listed candidates and unanimously selected Mr. Martin Osangiri Okiyo for the position. Martin has considerable experience in working with African countries and also has functional knowledge in French which will be useful for extending the EFA-VI Campaign in the French speaking countries.

*Welcome Martin to the ICEVI family!*
I consider myself to be extremely fortunate in many respects, living as I do in a well developed country with its share of problems, enjoying life to the full. My good fortune extends to the manner in which I read. My newspapers arrived early this morning on my phone and also by email. I have already had the opportunity to read some key articles using refreshable braille and speech. My portable refreshable braille display links relatively seamlessly to my iPhone 4S, computer and note taker. I have the advantage, sometimes the curse, of being connected in every sense. So why do I feel so uncomfortable? Why do I want to change the way I use braille to read?

**What is a refreshable braille display?**
For at least the past 30 years, braille displays of various shapes and sizes have been manufactured using the same technology. Pins are arranged in a 6- or 8-dot cell and are electronically raised and lowered to form braille characters. Displays are usually single line and range from 12 to 84 cells.

Most refreshable braille displays contain software which will translate braille into a number of codes. As I write, I can show my text in uncontracted or contracted braille with relative ease (although I urge manufacturers to accelerate the development of Unified English Braille translation).

Displays are integrated into note-taking devices to form portable, braille-based computers. Displays are connected to a range of devices so that people can read all kinds of information with their fingers.

There have been some recent innovations. Touch-cursors are included in many displays so that the computer cursor can be moved to a given point. Some displays are actually touch-sensitive so that they “know” where the reader is and can correspondingly move the cursor. However, the basic way in which a braille cell is created is the same for all displays and controlled by a number of patents.

**So what’s the problem?**
With prices for the most basic device starting at $1500, refreshable braille displays are only available to a privileged few who might have access to government funding. Many readers of The Educator may have chosen not to read this article, fearing that, once again, it covers a topic relevant only to the elite who can afford expensive devices. This situation must be changed through the development of new technology and business models which reduce prices by an order of magnitude.
As brilliant as it is, the refreshable braille display is really the technology of 30 years ago. I find it difficult to believe that it cannot be bettered in terms of affordability and functionality. There is an unhealthy degree of stagnation in innovation in this area.

Technological advance is a globally accepted norm from which refreshable braille display should not be immune. We need displays that can show solid raised lines to enable the presentation of tactile graphics, thin form factor displays, displays which better simulate the experience of reading a braille book or magazine. But, most importantly, braille displays have to cost less, much less.

Refreshable braille has the potential to open up access to reading for more people who want to read with their fingers. Recently published research in the UK shows that a paltry 7% of books are available in alternate format, but of the top 1000 books published in the UK in 2010, 54% are available as accessible electronic books. It is probable that this pattern is not replicated in many countries as the growth in e-books experienced in the UK and USA has not yet been globally replicated, but this will surely come. How fantastic it would be if many more people could use refreshable braille as I do to access that 54% of books, not to mention newspapers and magazines.

The future

We can be sure that the exponential growth of e-books will continue, and that mainstream technology, including mobile phones, will get cheaper. Technology and information will be available throughout the world. People will create and consume information at an unimaginable rate. Social and professional networks will continue to develop as a means of informing people of their rights and responsibilities, as well as simply having fun.

Those who read with their fingers must not be left behind. Refreshable braille will be of supreme importance if children are to engage with the scope and scale of information they need to enable them to obtain a sound education. It will enable them to interact in a world which increasingly exists around social networks. It will place information at their finger-tips as they move through life, enabling their independence.

In my brave new world, there will indeed be no need for braille transcription. Ideally, all braille will be automatically produced achieving accurate and readable results. Computers will continue to do a great job with the accurate translation of braille, but its readability is dramatically enhanced by sensitive formatting only currently possible through human intervention. The manner of the transcription challenge may change but I do not believe it will diminish over time, not least because there is so much information I want to read but which is not currently accessible.

I hope someday soon I will be visiting a school in India and will no longer hear that refreshable braille displays are just too expensive to be included in education. I hope I will see children accessing the phenomenally expanding world of information through their fingers as I do, creating that connection with literature through braille which is so poignant and so hard to describe.