THE BRAILLISTS FOUNDATION

JAWS AND BRAILLE: A CLOSER LOOK

Matthew Horspool: Welcome back to Braillecast Extra. Coming up this time, JAWS and Braille: A Closer Look, a session recorded on Tuesday, 6th of July 2021 and introduced by Dave Williams.

Dave Williams: Good evening and a very warm welcome to the Braillists Foundation Tuesday Master Class. I'm Dave Williams, chair of the Braillists Foundation and it's a pleasure to have your company this evening.

Tonight we will be exploring some of the common braille issues that you might encounter when you start to use a braille display with a screen reader. Matthew Horspool, who has a raft of experience with braille technology and transcription, will be leading this one and Matthew will be working with his braille display and a very popular screen reader and really taking you through some of the things that really jump out as being problematic when you first start using a braille display with your screen reader and I'm sure he'll be highlighting some of the benefits as well.

Mr. Ben Mustill-Rose is in this evening on moderation duties, so when we get through Matthew's content and it's time for questions, Ben will be asking you to raise your hand with your questions.

Good evening to you, Ben.

Ben Mustill-Rose: Good evening, good evening, Dave.

Really looking forward to this one actually. I feel like JAWS braille support, I've used it on and off and it's always seemed quite powerful but I feel like there's probably quite a bit of stuff that I still don't know.

Dave Williams: Like you, I'm looking forward to learning what are those common issues that people can run into and I'm sure some of them I'll know but there's always going to be something that I didn't know about.

So, without any further ado, we're going to turn it over to Matthew who is going to present for probably about half an hour and then we will take your questions. Good evening, Matthew.

Matthew Horspool: Good evening, Dave, good evening, Ben and good evening, everybody in the room. It's wonderful to be back to present another Master Class. I quite enjoy presenting these Master Classes and haven't done that many of them. I'm normally on the other side of the microphone somewhere so it's good to be here.

I feel like there's been a lot of build-up to this session and I should probably set some expectations before I go too much further.

This is not a session for complete beginners. It's a session for nearly beginners but we do assume that you have a copy of JAWS and that you have a braille display and that you've worked out the basics of how to get that braille display plugged in. So, we're not going to talk in this session about USB and Bluetooth and all of that sort of thing. That was covered quite extensively in our Using Braille on Windows session, which you can refer back to on the Media page and in the podcast.

So, we'll assume the braille display is plugged in. We're not necessarily going to assume that the braille display is set up. That's the first thing that we will cover, just very quickly, is how to actually set up a new braille display for the first time and we'll then go on to choosing your braille code and your braille grade, so all this might be fairly basic stuff for some people but not for others.

Then we'll go a little bit more technical and we'll talk about status cells. Status cells are one of these things that many people turn off because they don't really see how they'll be useful, so we'll talk about how to turn them off if you want to turn them off but we'll also talk about what they actually do and why, in fact, you might want to leave those status cells on.

We'll talk about how to reverse the panning buttons. We'll talk about panning by paragraph which sounds very technical but basically it's to stop you from having long line followed by short line following by long line followed by short line on your display. The final thing that we will talk about, but probably not dwell on as much as we should, because this really is tilting towards the very advanced area, is the feature of JAWS called Braille In™ and in particular I do want to spend about five minutes or so talking about how to use modifier keys, how to use the braille keyboard to type modifier keys, because it's something that is very powerful and not talked about a great deal.

Let's start at the beginning, I'll just press a button that makes it so that you can hear my JAWS and we'll talk about adding a braille display to JAWS. So, you've got your braille display. In this case, it's an Orbit Reader. You've unpacked it, you've plugged it into the computer and now you're at the stage of having to get it to work with JAWS.

On the Orbit Reader, I should say, it says, "HID Orbit," this is important, this is the mode that it wants to be in, no "HID braille" or Bluetooth or anything like that. It just says, "HID Orbit" on the display. You could run it in Bluetooth but I'm not going to cover that today.

You actually add braille displays through the "Synthesizer and Braille Manager." That can be found in the JAWS Utilities menu. It can also be accessed through the "Braille Basic Settings" dialog and that's the way I'm going to do it for this session, because there are other reasons why you might want to use the JAWS Braille Basic Settings dialog.

If I do an Insert T to get the window title...

JAWS: JAWS Professional.

Matthew Horspool: ...I can hear I'm in the JAWs Professional window. Many people have JAWS in the System Tray. If you've got JAWS in the System Tray, or you're not in the JAWS window, if you do an Insert J to get back to the JAWS window and then either go to Options in the menu or press Alt+O to get there from the JAWS window.

JAWS: Options Menu, Basics dot dot dot B.

Matthew Horspool: So, you can hear I've gone into Options. It says Basics dot dot dot and I'm now going to press L to go into the braille options, L for braille, because B is for basics.

JAWS: Leaving menus, braille basic settings, the active braille display is Brailliant BI 40X, [chime] default braille display, Brailliant BI 40X, three of three, Alt+D.

Matthew Horspool: Please forgive the sounds. I have a very complicated customised speech and sounds scheme and I have forgotten to turn this scheme off. You heard a chime there that meant I was in a combo box and it's asking me what braille display I want. This we'll come back to later. For now, though, I'm going to press Alt+B to add a braille display.

JAWS: Select components, select the braille components you want to add or modify. [chime] One, Focus not checked, one of 32.

Matthew Horspool: Okay. So, I'm in a list and if I'd have gone through Synthesizer and Braille Manager, I'd have actually got to the same list eventually and there's 32 braille displays. There's quite a lot of braille displays in that list. You can up and down arrow.

JAWS: Activate display not checked, two of 32. Braille light all models not checked, three of 32. Optic Alva BC6 not checked, four of 32.

Matthew Horspool: And most of these are not checked. That's fine. You can also use first letter navigation in this list, so I'll press O.

JAWS: Orbit Reader 20, not checked, 18 of 32.

Matthew Horspool: And Orbit Reader 20 is not checked. So, I want it to be checked because I want to use the Orbit Reader 20 with JAWS, so I’ll check it, [knock] with the spacebar and the knock means checked and I'll just press Enter to go to the next dialog box.

JAWS: Set options for the Orbit Reader 20 display. This braille display connects through a USB port or a Bluetooth serial port. Select the output port. USB, one of one. Alt+D, computer braille.

Matthew Horspool: Okay, USB is actually the only option available here. If I had a Bluetooth stack, then Bluetooth would also appear in this list, but USB is fine, so I'll press Enter again.

JAWS: Select the braille display that you want to use each time you start JAWS. If the braille display does not appear in the list, choose the back button and then select the one you want to use [chime]. Primary device, Brailliant BI 40X, two of three. Alt+D.

Matthew Horspool: Okay. So, at the moment I'm driving JAWS with a Brailliant BI 40X. I'll actually switch back to that at some point but for now I want to use the Orbit, so I'll just up and down arrow in this list until I find…

JAWS: Orbit Reader 20.

Matthew Horspool: …Orbit Reader 20 and press Enter.

JAWS: JAWS Synthesizer and Braille Manager, you must restart JAWS for the changes to take effect. Okay.

Matthew Horspool: Okay, that's fine. I'll press Enter and I'm back in this Braille Basic Settings dialog box. I think if I do an Insert E:

JAWS: Okay.

Matthew Horspool: Yeah, so I can press Enter again to get out of this dialog box.

JAWS: JAWS Professional.

Matthew Horspool: This is a bit scary. I now need to restart JAWS. It hasn't restarted by itself. I'm going to restart JAWS and I'm going to do Alt+F4 to quit JAWS. I'll go to Run and type JAWS 2021 and press Enter.

JAWS: JAWS, participants 36, arrow.

Matthew Horspool: Yes, well, of course this is what was supposed to happen and this is what didn't happen. What was supposed to happen was the Orbit Reader was supposed to come up. Of course, the Orbit Reader didn't come up. This is what happens when you do live demonstrations.

Let's unplug the Orbit Reader and plug it back in again and see if that [chime] makes it do clever things. No, it hasn't.

I won't dwell too much on this but this is real life, this happens to the best of us. I'm just going back into the Braille Basic Settings.

Rookie mistake there, having set the default braille display in the Synthesizer and Braille Manager, I then needed to set it again in the Braille Basic Settings. I'll change it to Orbit Reader 20. I'll quit JAWS again and I'll restart JAWS and show that the Orbit Reader 20 really does work. I promise you it does.

JAWS: JAWS, participants 36, length of--

Matthew Horspool: Actually it still hasn't, which is a bit embarrassing, because I managed to make this work earlier on. I'm not going to dwell on it at this point because there's other things that I want to cover in this session, but if this happens, there are various things you can try, including as I just did, unplugging and plugging the braille display back in again. You might need to restart your computer. That can sometimes kick it into action. Just check that all of the settings are right and something eventually will click and it will just work and I'm sorry that it hasn't worked during this demonstration.

What I actually want to do is switch back to the Brailliant, so I'll do that, by going up one to Brailliant BI 40X and pressing Enter and I'll try restarting JAWS again and just hope that the Brailliant talks at least, otherwise we really are in trouble.

So, that's worked. Well, we're back on track now, anyway. Here I am, back in JAWs, with the braille display working and I'm in the JAWS window and on the display I can see the version number, I can see the line of text that says JAWS version 2021.2105.86ILM. At the left-hand side of this line, because I'm on a 40 cell braille display, I can see a whole combination of cells which don't actually mean an awful lot. If I actually look at these cells in more detail, I've got dropped numbers. I've got 034 in dropped numbers, P, S, and underneath 034 and P, I've got dots 7 and 8 showing. These are the status cells and this is what I was saying people might want to turn off because they're a little bit annoying. However, before we talk about turning them off and what to do to turn them off, let's talk about why they're not perhaps as annoying as you might think.

There are five of these status cells, maximum. Some braille displays don't show all of these. Some braille displays show none of them. Some braille displays show all of them. Some show in the middle. If you've only got two or three status cells, it won't show the line number. It won't show the 034, it will just show the P and the S.

If you've got four status cells, it will show 034 P and if you've got five, it will show everything, 034 P S.

I think I've just given away the secret. The 034 is the line number on the screen and if I pan up, it's showing the line number of the PC cursor, not the line number of the braille cursor. So, as I pan the braille display, the line number isn't changing, because I'm panning the braille display without panning the cursor. If I was in a Word document and I was to move the cursor up a line, that number would change to the line above or the line below.

The letter P next to 034 tells me that it's the PC cursor that is working. If I do a number pad minus…

JAWS: JAWS.

Matthew Horspool: …first of all I've got a flash message on the braille display that says JAWS but if I clear that flash message with a cursor routing key, I can now see "746 J S" and if I up arrow…

JAWS: When. When. When.

Matthew Horspool: …it's actually still on "746 J S" but it's the J that's important here. The J says I'm on the JAWS cursor.

JAWS: PC.

Matthew Horspool: I'll press number pad plus to go back to PC. The S, the final status cell, is telling me what braille mode I'm in. We won't talk too much about braille mode here, but you can set the braille mode to either be in line mode or in structured mode or in speech history mode or in attribute mode. By default it's in structured mode and that's by and large where you might want it to be left, but if you wanted it to work more like a traditional braille note taker where the braille display just echoed back everything that was spoken, you might want to put it into speech history mode or something along those lines and that final status cell just tells you what mode you're in.

The dot 7 and 8 underneath are also quite important, and actually I find dots 7 and 8 more useful than anything else on these status cells put together. Dots 7 and 8 show the state of panning, if you like. So, the way it is at the moment, the S has not got dots 7 and 8 underneath. That's because the braille display is not showing the entire line and what that means is, if I pan right a bit more, I can see the remainder of the line and the S now has dots 7 and 8 underneath, to show that we've now got the whole line. The zero of 034 now has its dots 7 and 8 removed. So the missing dots 7 and 8 has jumped from the rightmost end of the status cells to the leftmost end of the status cells and this means that if I was to pan left, there's content for me to see.

So, it's a very easy way of being able to tell whereabouts I am on the line. Am I at the start of the line, the middle of the line, the end of the line and how much further have I got to go? Am I so far at the end of the line that I don't need to pan anymore or have I got to worry about panning? Sometimes this can be really annoying. If somebody puts a space at the end of a line, you'll think, hang on, I've got the entire line on the screen, why do I need to pan? It's because that one space has tripped up the status cells, but by and large, if the document is typed nicely, this can be a really useful feature and I do tend to keep them on.

The final thing to say about status cells before I finally tell you how to turn them off, if you just don't want them, if you just want all of the 40 cells for text, is that the status cells by default will show you the type of control that is in focus. If you're going through a dialog box, it will tell you, for example, BTN for button, it will show LBX for list box and so on.

Let's go into Settings Centre. We can do this with Insert 6. We can do it by Insert F2 or whatever combination we want, but let's go into Settings Centre.

JAWS: JAWS Window, JAWS Setting Centre. Search box.

Matthew Horspool: Okay, and I'll do this in the default file. I'll do Ctrl+Shift+D.

JAWS: JAWS Setting Centre, default, all applications.

Matthew Horspool: And I'll tab once to the tree view.

JAWS: User closed [chime].

Matthew Horspool: And go down to braille.

JAWS: Braille closed.

Matthew Horspool: And right arrow to open it and then go down to Advanced.

JAWS: One, advanced, closed.

Matthew Horspool: And right arrow to open it and I'll keep down-arrowing through this list.

JAWS: Two, placement of status cells left, one of three, advanced braille.

Matthew Horspool: Okay. If you want to turn status cells off, or if you want to put them at the right-hand end of the display, that's how you do it. If we press the spacebar at this point…

JAWS: Right, two of three.

Matthew Horspool: …on the right or…

JAWS: None, three of three.

Matthew Horspool: …none. If you actually just don't want these status cells at all, set it to None and the status cells will go away and all 40 cells of the braille display will be used for text. I actually have this set this way in Notepad. In every other application, I have status cells turned on. In Notepad, I turn them off and the reason for that is because I also have Notepad sent to computer braille and that then allows me to read BRF files with all 40 cells of the braille display mapping to all 40 characters of the BRF line.

For this, I will set it back to left.

JAWS: Left, one of three.

Matthew Horspool: And just very quickly, if we close out of this…

JAWS: One. Advanced, closed, zero.

Matthew Horspool: …and we go back up to braille and then I'm just going to go to Structured Mode…

JAWS: Two, include optional components, closed.

Matthew Horspool: …and then to include optional components…

JAWS: Three. Type on the status cells, one of seven.

Matthew Horspool: …and this, if for some reason, you always want the status cells to show the line number, so you never want the status cells to show BTN for button or LBX for list box or anything like that, if you always want the status cells to be status cells, you can toggle this, so you could set it to…

JAWS: Off, one of three.

Matthew Horspool: …off which I wouldn't recommend or…

JAWS: On, two of three.

Matthew Horspool: …on and if you have it on but not on in status cells, then BTN will move from the status cells and will move into the main body of the text. So, that will take up much more space on your braille display. I don't recommend it but there might be genuine reasons why you'd need to do that and it's good that the option is there.

At this point, I'm going to break for questions, because I've lost my place in my outline actually. So, while I go and find my place in my outline, Ben's going to tell you how to raise hands and then I'll answer a couple of questions and then I'll carry on.

Ben Mustill-Rose: Thank you, Matthew, great session so far.

If you have a question, please raise your hand and there are a couple of different ways you can do that. If you are on Windows, you can press Alt+Y, if you're on a Mac, you can press Option+Y, if you're dialling in on a telephone, you can press star+nine or if you are using the Zoom app on an iDevice or an Android device or similar, press the More button which is represented visually by three small dots on the bottom right of your screen and then press the Raise Hand button.

So, Matthew, we've got about three hands. We're going to come to Teresa first and then Kawal.

Teresa: I have a Focus braille display and I am using it with JAWS and I do use the status cell and I would like to know a bit more about the numbers that appear and how they actually work, because I didn't understand it very well. As far as I can see, part of it has to do with the line number, right? Is that the second number? I have four characters in that status cell so I would like again to understand this part of it.

Matthew Horspool: If you've got four status cells, the first three cells are always the line number. If the line number is less than three cells, it will be padded out with zeroes. So, if you're on line 42, that line number will show on the braille display as 042, until you get to 100 and then it will be one zero zero, one zero one and so on.

How the line number is calculated is a bit of a mystery. If you're just randomly on the computer, just in a program window or something, it's probably not quite accurate to call it the line number, I've simplified it a little bit. It's actually the pixel location, the X axis pixel location on the screen. So, it's probably also not very relevant in that sort of application, but if you're in, say, a Microsoft Word document or on a web page, then it will grab the line number from the document and so it will actually show that the first line of the document will be zero zero one, zero zero two, zero zero three and so on, based on the lines of the document or the lines of the web page.

Teresa: Okay, so right now I have five oh eight.

Matthew Horspool: Yes, so that's telling you that you're on line 508, but whereabouts are you at the moment? You're probably in a window somewhere so it's probably just showing that you're on the 508th pixel down from the top of the screen which might not be terribly useful. If you're in a Word document, that line number will actually reflect that you're on line 508 of the document.

Ben Mustill-Rose: Thanks for that, Teresa. We're going to go to Kawal next and then Lielle.

Kawal: I had a job interview today and I was using JAWS and a Focus braille display, although I was answering all the questions using braille only because I didn't want to use speech, because the speech interrupts when people are speaking to you. So I had to read as fast as possible using my braille display whilst making sense. Each time I got to a new line or something, sometimes the braille display would either freeze and then not refresh itself and then I'd have to go down a line with my speech to get it all back on track again. Can you tell me why that would happen?

Matthew Horspool: It sounds like the braille cursor is panning around the window rather than panning around the document. It sounds like the braille cursor has dropped onto the status bar or something at the bottom of the window. One of the things I wanted to talk about was reading by paragraph which sometimes can fix that problem, sometimes it can't. I think at that point it's about judicious use of the braille display keys. There'll be a key on the Focus display, and I can't remember what that key is, that will simulate the down arrow key. It's a good idea to know about exactly how to pan through a long document like that.

Kawal: Thank you very much. I've put something in the chat so you can have a look at that whenever you like.

Ben Mustill-Rose: Thank you, Kawal, and best of luck with the job interview. We're going to come to Lielle next.

Lielle: Can I turn on the status cell for my braille display?

Matthew Horspool: It depends which braille display you've got. I ran this experiment on the Orbit reader earlier on and I couldn't get status cells to work.

Lielle: I have a Polaris and I want to know if I can turn on temporarily?

Matthew Horspool: Yes, I see what you're asking. I don't think there's a JAWS key stroke that will just sort of toggle status cells on and off. I'm not very familiar with key strokes, I tend to do it all through the menus.

Lielle: Can I assign this?

Matthew Horspool: I don't know. I was playing around with the default file but you can save the setting on a per application basis. So if you went into Settings Centre while you were in Word and had the Word JCF file open and toggled status cells on and off, that would only affect Word, so you could have them turned off in the default file and then explicitly turn them on in Microsoft Word and that would do, I think, what you want it to do.

Ben Mustill-Rose: We're going to come to a question from phone number ending in 596 first and then we'll finish off this section of participation with a comment from James.

Phone number: I believe the key on the Focus to go up and down by your up and down arrows could be the rocker bars. I have the older model, I don't have the latest one but I believe the rocker bars might get you to go up and down by your arrow keys.

Matthew Horspool: That's very helpful. Thank you.

Ben Mustill-Rose: And finishing things off with a comment from James Bowden.

James: Two comments. Lielle, there is a key which will announce the line number with speech and if you press that, it also goes on the braille display. It's Insert + Delete.

I don't know if there's a key stroke to actually toggle the status cells on the braille display but that might be helpful.

The other comment, Matthew, I absolutely sympathise with your frustration about getting your braille display to work in JAWS. We've all had this problem and sometimes there is a trick in the order that you do three things. One, turn the braille display to the current mode. Two, start JAWS. And, three, plug the thing in.

Now, permutations of those three things can make things work or stop things working. So, find an order that works and then stick with it.

I also wanted to say, particularly for the Orbit Reader, if you unplug it, it will return to its stand-alone mode so if you plug it in again, you have to put it to the correct mode again.

Matthew Horspool: Would you believe, I think I forgot to do that? So that's probably why it didn't work the second time around, isn't it? Thanks for giving some tips on the other of things and also confirming that I'm not going completely mad and, yes, we all do have these problems. People did say to me before I started, are you sure you're not going to record this in case anything goes wrong? I said, no, nothing will possibly go wrong. Of course, it did.

I just wanted to check that key stroke. I never thought about using that key stroke but I think it might be Alt + Delete, rather than Insert + Delete.

James: It's Insert + Delete on the laptop certainly.

Matthew Horspool: Okay, I'm using desktop layout. It's the one that tells you which cursor you're using.

James: On mine, in Word, it says, line one, column one.

Matthew Horspool: Okay.

James: Alt + Delete says TC cursor active.

Matthew Horspool: You're right. My goodness. Insert + Delete does work and Alt + Delete--

James: Tells you the active cursor.

Matthew Horspool: I used to use Alt + Delete in Notepad to get my line and column numbers. Anyway, we're going off track. Insert + Delete is the one and I've learned something new today as well.

Thanks for all of those questions and there will be time for a few more later on.

In my excitement to talk about status cells, and I've now understand why I got lost, I forgot to tell you how to set your braille grade, which I was actually going to do before I talked about status cells, but never mind, we'll do it now. You're going to be very familiar with Settings Centre by the end of this session and because we've already talked about Settings Centre, it won't take long to cover this. So I'll do another Insert 6 to bring up Settings Centre.

JAWS: JAWS Window, JAWS Setting Centre.

Matthew Horspool: You don't need to be in the default file to do this but I will go to the default file because it's a bit neater.

JAWS: JAWS Setting Centre default all applications.

Matthew Horspool: I'll tab to the tree view.

JAWS: Zero [chime] user closed, one of 27.

Matthew Horspool: I'll press B for braille.

JAWS: Braille closed.

Matthew Horspool: And right arrow to open.

JAWS: Braille open, six items.

Matthew Horspool: And down arrow once to general.

JAWS: One, general, closed, one of six, braille.

Matthew Horspool: Now there's a trick with this Settings Centre. Sometimes space-barring through the tree view and all this sort of thing can be a bit of a pain. The way that the Settings Centre is laid out visually, it's a bit like an HTML help system and it's divided into two parts, with the tree view on the left-hand side of the window, or possibly in the upper part of the window, and normal dialog box controls on what I think is the right-hand side but possibly the bottom half of the window.

Like HTML help, you can navigate between the dialog controls and the tree view with F6, which is a Windows key stroke, although you wouldn't think it, to move between different panes of a window.

So, if I press F6 now that I'm on general…

JAWS: General, translation language, English, United Kingdom, 14 of 52. Alt+up.

Matthew Horspool: …I'll get to something, if anybody remembers the JAWS Configuration Manager from years gone by, that resembles the Configuration Manager at this point and I've got combo boxes and list boxes and check boxes, unlike this tree view.

So, I can tab through this, I can shift+tab, I can up and down, and this is where you would change your braille grade and your braille code.

It's quite important to point out that, a little bit counterintuitively, UEB doesn't have its own option in this list. If I go up and down a little bit…

JAWS: Dutch, Netherlands. Dutch, Belgium. Danish, Denmark.

Matthew Horspool: Okay, I'll do down.

JAWS: Dutch, Belgium. Dutch, Netherlands. English, United Kingdom. English, United States. Estonian, Estonia.

Matthew Horspool: So there's no such thing. If I press U, I won't get anything. There's nothing beginning with U. UEB is actually just within the standard list of braille tables for a particular country. So, if I go back up to the English, UK.

JAWS: English, United States. English, United Kingdom. 14 of 5--

Matthew Horspool: And I tab once.

JAWS: [chime] Translation output, U.K, English Grade 1, two of five. Alt+O.

Matthew Horspool: Notice that there's five options so I can down arrow now.

JAWS: U.K, English Grade 2, Unified English Braille Grade 1, Unified English Braille, Grade 2. Five of five.

Matthew Horspool: Okay. So that's where UEB is, if you wanted to switch braille code and braille grade. Don't look for UEB in the language, you won't find it. Set it to English UK or indeed English US and UEB will appear in that list.

Bear in mind, this is the output. If you were using JAWs Braille In™, you would also need to tab once more.

JAWS: Translation input, Unified English Braille Grade 2.

Matthew Horspool: And actually that's great, because the output table is set to UEB, the input table's gone and married it, which is great but it might not have done, so it's worth double-checking.

There's one more thing I want to look at while I'm in this dialog box before we come out of it and talk about something more exciting, namely computer braille. If you're reading BRF files and we covered this in an earlier session, you'll want to be in computer braille so that you can read the BRF file properly. US computer braille is very important. If you shift+tab and then have a look at the tables that are in English UK…

JAWS: Computer braille, one of five.

Matthew Horspool: …the first one says computer braille. If you're set to English UK, please don't use English UK computer braille unless you actually want to use English UK computer braille. If you try to read a BRF file with that particular computer braille table, you'll come unstuck. The way to do it is to go back to…

JAWS: Translation language, English United Kingdom.

Matthew Horspool: …the language.

JAWS: English, United States, 15 of 50.

Matthew Horspool: Move down to English US.

JAWS: [chime] Translation output, computer braille, one of five.

Matthew Horspool: And then set it to computer braille at that point. Then we're using the US computer braille table, rather than the UK computer braille table.

One more setting is the prevalence of 8-dot versus 6-dot. Notice that actually there's no option at this point for whether we want 8-dot braille or 6-dot braille. In some screen readers you have to select 6-dot computer braille or 8-dot computer braille. In JAWS this is a check box a little bit further along. If I keep tabbing…

JAWS: Translation input, translation computer braille tables dot dot dot.

Matthew Horspool: We won't worry with that too much.

JAWS: Braille mode, structure, panning user pan mode, automatic, pan, pan text by paragraph, panning model, pan mode, automatic, panning model, advance maximum, panning braille presentation, panning reverse, panning bu-- active cursor follow, braille cursor follows active, display text in 8-dot braille mode, Alt+8.

Matthew Horspool: And that's the check box that we want, "Display text in 8-dot braille mode." If your BRF files are not displaying correctly, then uncheck this box. It's checked by default. If you press the spacebar to uncheck it, that will revert it to 6-dot computer braille and you'll be able to read it without the annoying dot 7s popping up every time there is a capital letter, of which there are many in some BRF files.

While we're in Settings Centre, there are a couple of check boxes which I scrolled past in my haste to show you the 8-dot braille check box, which I want to go back and have a look at. So, if I shift-tab up this list…

JAWS: Braille cursor follow, active cursor follows braille display, panning reverse, panning buttons, alt+D.

Matthew Horspool: That's the first one that I want to talk about, reversing panning buttons. This is a feature that some people really like and some people really don't. It's off by default. You can turn it on by checking that box. If you're using a braille display, JAWS will assign one of those buttons to be the right panning button and one of those buttons to be the left panning button. On a Brailliant BI 40X, which is one I happen to use, it's the inner thumb keys. The inner thumb key on the right is the right panning button and the inner thumb key on the left is the left panning button and by default, if I press the inner thumb key on the right, it moves the braille display to the next section of text and if I press the one on the left, it moves to the previous section of text. That's all very logical. Some very fast braille readers, very advanced braille readers who are used to the idea of panning the braille display with the hand that returns to the start of the line, so rather than pressing the panning button and then moving to the start of the line, some people prefer to move to the start of the line and then press the panning button and in that case, they might want that reversed so that the panning button on the left-hand side moves to the next portion of text and the panning button on the right-hand side moves to the previous portion of text. That check box that we've just seen…

JAWS: Reverse panning buttons.

Matthew Horspool: …reverse panning buttons, if you check that, will do exactly that. It will reverse those panning buttons.

There are a few very important caveats with this though, the most important one being it only works with the panning buttons that JAWS defines as a panning button. So, for example, if I do keyboard help…

JAWS: On.

Matthew Horspool: …with Insert 1 and I press the right outermost thumb key…

JAWS: Braille T4, move the braille cursor down and display the next line of text.

Matthew Horspool: …so that's talking.

JAWS: Braille T1, move the braille cursor up and display the prior line of text.

Matthew Horspool: That's the thumb key on the left. If I press the innermost thumb key on the right, however, it's not talking. It's moving the braille display, but it's not talking. So that's how we know that it's a panning button. Braille T4, the rightmost thumb key…

JAWS: Braille T4, move the braille cursor down and display the next line of text.

Matthew Horspool: …it's talking, that's not what JAWS would call a panning button. That just happens to be assigned to a command that pans down.

So, you can reverse the panning buttons and that will reverse the JAWS panning buttons but if you also want to reverse the arrow keys or things like that, you'll actually have to go into Keyboard Manager and do that yourself. That check box will not work with Keyboard Manager.

If there's time at the end of the session, I'll go through how to do that but I think it might be a little bit beyond this session. It's in the Keyboard Manager and you'll need to that probably in the default key maps so that it works for all applications.

The other check box that I want to draw your attention to is a few shift+tabs back.

JAWS: Shift plus tab, sends it--

Matthew Horspool: Well, keyboard help is on, so we'll turn keyboard help off first.

JAWS: Off. Panning braille presentation, panning model advance, panning model, pan mode, panning, pan text by paragraph, Alt+D

Matthew Horspool: Pan text by paragraph is one of these interesting check boxes which nobody quite knows what it does and so nobody bothers checking it and then everybody complains that their braille display doesn't work quite right.

The way that braille displays work in JAWS by default is that one line of text corresponds directly with one line of braille or possibly two lines of braille or possibly three lines of braille, but the point is that the line of braille cannot cross two lines of text.

So, if I go to the Word document where this handout is…

JAWS: JAWS doc Zoom meeting, JAWS and braille dot docs Word, page 3, page 3, JAWS, reversing panning button.

Matthew Horspool: …and I'm on reversing panning buttons. If I down-arrow from here…

JAWS: By default the right down panning button will move the display to the right whilst the left or--

Matthew Horspool: It finishes at "or" so if I pan through this, "by default the right or down, blah, blah, blah, to the right whilst the left or--" and the braille has stopped at the end of that line with about half of the braille display left to go, and it's very annoying.

Why has it stopped at the end of that line? Why couldn't it just carry on to the next line?

JAWS: Up panning button will move the display to the left with--

Matthew Horspool: It makes no sense. There are various reasons why actually you will want JAWS to behave in this way, especially if you're working in plain text documents where paragraph boundaries are perhaps not always the easiest to find. But in things like Microsoft Word documents, this can be very annoying.

So, let's go back to Settings Centre.

JAWS: JAWS Setting Centre, default, all applications, pan text by paragraph.

Matthew Horspool: This "pan text by paragraph" fixes this problem. This is the check box that very counterintuitively allows for a braille line to span over two lines of text. So, if you check this box and then go back into Microsoft Word, what you'll find at that point is that, where it previously would break at the end of a line and there's half of a line, it will no longer do that, it will just carry on, onto the next line, until it encounters what JAWS imagines to be a paragraph.

So, if you Ctrl up and down arrow through something and it starts a new paragraph, that's what JAWS will define as a new paragraph for the purposes of braille.

Notice, in Word, that shift-Enter, to do a line break without a paragraph break, is not a paragraph and therefore if you've got documents that have been shift-Entered, checking this box will really, really mess up the way that those documents have been done.

So, there are reasons why you will want to be a bit judicious with your use of this and you might want to turn it off in some cases, but in the vast majority of cases I've actually got it set up by default, on mine I've got it set up so that paragraph is on by default in Word and off everywhere else and that seems to work well for me. To me it's a very useful check box and not one that people talk about very often.

I'm conscious of the time but the last thing I wanted to cover in this session was the Braille In™ mode of JAWS which works with certain braille displays. It works with the Focus and it also works with the Brailliant. I'm sure it works with others but sadly it doesn't work with the Orbit as far as I can tell.

This first of all allows you to write in Grade 2 and it will convert it on the fly into text. So, if I was to open a blank Word document…

JAWS: Document two word, eight words.

Matthew Horspool: …and I'll set it to both characters and words and I'll type.

JAWS: Dot 6, M, Y, my, dot 5, N, name.

Matthew Horspool: So, notice that it translated dot 5 N into name straight way.

JAWS: I, S, is, dot 6, M-A-T THE sign, W, low d, Matthew, period.

Matthew Horspool: And so all of that, I'm just typing on my braille keyboard and all of that translation, JAWS is making that happen and putting all of the text into Microsoft Word.

Not many braille displays support it and it's done slightly differently on different displays. I'm going to talk about the Brailliant because the Brailliant is what I know. The Focus uses slightly different keys so you need to be a little bit careful. What you can do, however, is emulate modifier keys.

So, for example, by pressing a certain key on the braille display, I can hold the control key down and then I can press another key, for example, Ctrl-A will select all. The way that this works, and this is consistent across braille displays, is to press space and dot 8 or space and enter at the same time, in conjunction with another key.

So, on the Brailliant, the control key is dot 3. So, if I want to lock the control key, I do space and dot 8 and dot 3 at the same time. I'll turn keyboard help on first.

JAWS: On.

Matthew Horspool: That will give you a better idea of what's going on.

So, if I type dot 1 now.

JAWS: A.

Matthew Horspool: It just says A. If I type space and dot 8 and dot 3 at the same time, nothing happens but if I then press dot 1…

JAWS: Control plus A selects the entire document.

Matthew Horspool: …that's now done a Ctrl-A for me.

If I do space and dot 8 and dot 2, that will be the Alt key.

JAWS: Alt+A, one of the keys which are accelerators in spell check dialog, outside spell check may serve--

Matthew Horspool: Okay, that's quite a lengthy message. Similarly space with dot 8 and dot 1 is the Windows key.

JAWS: Windows R.

Matthew Horspool: Okay, so that all works.

You can combine these together. For example, I could do space with dot 8 and dot 3 and dot 7. Dot 7 on the Brailliant is the shift key. Then add, say, the letter T…

JAWS: Shift plus control plus T, remove an indent.

Matthew Horspool: …which apparently removes an indent. This is very powerful. In fact I'll do this from the keyboard as well. Dot 5 is the insert key. So, if I do space and dot 8 and dot 5 and then do a dot 2 which is the computer braille for a one.

JAWS: Off.

Matthew Horspool: That's turned keyboard help off and now, for example, I can do space with dot 8 and dot 1 and then R.

JAWS: Run, type the name of a program.

Matthew Horspool: Now, I can type N-O-T-E-P-A-D on the braille display and press enter.

JAWS: Untitled Notepad, computer braille.

Matthew Horspool: And I'm in Notepad and I can type some text. If I want to do the function keys on the Brailliant, and I stress on the Brailliant as the Focus is slightly different, you do a dot 4. So, space with dot 8 and dot 4 will type an F key and then if I want to do, say, F4, I do the letter D. If I want to do F5, I do a letter E. If I want to do F8, do a letter H and so on. And if I want to do F12, I do the letter L. So that's how that works.

Using this same principle, if I do space with dot 8 and dot 2 and dot 4, this is getting very complicated, I should have held down the Alt key and triggered function key mode, to then do a letter D for F4.

JAWS: Notepad, do you want to save changes to untitled?

Matthew Horspool: And that's done an Alt+F4 and I can now press the letter N on the braille keyboard.

JAWS: Document two words.

Matthew Horspool: And that's closed my Notepad window

I'll just see what the time is and I'll do that by using the JAWS key which is dot 5, so space with dots 8, 5 and 4 and the letter L…

JAWS: 20:23.

Matthew Horspool: ….tells me it's 20:23, so we've got seven minutes for questions. I realise that was a very quick overview of what can be done. This is kind of the way the ElBraille works but I just wanted to give people a flavour of that and particularly on the Brailliant because I don't think it's very well known that the Brailliant has that functionality.

I'll turn over for questions now.

Ben Mustill-Rose: Thank you once again, Matthew. We're going to come to Marsha first and then Theo.

Marsha: I was going to give you a little titbit that I found because I keep my braille display to contracted with both input and output but if you want to turn your translation on and off, it's chord G plus the dot 7 key, all pressed at the same time, when you're getting into an already translated file.

Matthew Horspool: Yes, that's very helpful, thank you. Interestingly I think that's one of the commands that is a bit different depending on which braille display you're using. That's not actually working for me, but there is an equivalent.

Marsha: That is the JAWS command for that.

Matthew Horspool: Yes. For some reason it isn't working for me, but, yes, I have seen that command written down somewhere and I've definitely got a command somewhere that makes that work.

Ben Mustill-Rose: Thanks for that. We're going to come to Theo and then Tracy.

Theo: I'm going to get a new Brailliant soon, the Brailliant BI 40X and I know lots of people have old Brailliant devices, I'm wondering, is the layout of the keys different to how it was on previous devices?

Matthew Horspool: That's a very good question. The new Brailliant actually looks quite different to the old Brailliant, in terms of it's made of plastic and so it doesn't look too much like the old Brailliant, but actually when you look at the keyboard, the keyboard is basically exactly the same, apart from some better spacebars and the only extra key to worry about is the Home button in the middle. All the thumb keys are the same and all of the commands, all that braille input stuff, and emulating modifier keys that I was just talking about, all of that works the same.

Theo: Thank you. I know the Focus has different commands to the Brailliant and Orbit Reader but I'm just wondering, are there any other braille displays that have a completely new set of commands?

Matthew Horspool: No, it's very confusing. You might know something about the Human Interface Device Standard for braille displays and one of the big problems you had when you wrote the HID standard was every braille display is different. They're all fundamentally the same, they've all got panning keys and cells, but the Focus has got nav rockers and panning buttons and all sorts of things compared to the Brailliant's rather measly four thumb keys and three control keys and the Orbit Reader's set of arrow buttons and no cursor routing buttons. So, there's just so much difference in terms of how these braille displays are made that I don't think anybody's managed to come up with a universal set of commands that just works everywhere.

There's also a disparity between the commands that you want to work in JAWS and the commands that you want to work on the braille display itself. So, for example, in the Orbit driver, the Orbit driver is set up by default so that the Orbit Reader with JAWS works the same way or as close as we can get it, to the Orbit Reader in note taker mode but those commands in note taker mode are not quite the same as the commands that you might have on another note taker. So, therefore, do you want the braille commands in JAWS to replicate the Orbit commands or do you want it to replicate every other braille display? Nobody's really quite got to the bottom of the answer to that question.

Ben Mustill-Rose: Thank you, Matthew and Theo. We're going to come to Tracy.

Tracy: In the UK, is there overall a variety of different braille displays or is there one that's prevalent that blind people use? I'm just curious.

Matthew Horspool: That's a bit like how long is a piece of string and it's a bit complicated. There is a variety of braille displays, if you can get them funded. The people who distribute braille displays, like Sight and Sound and Humanware, are quite well known to the university market and to what we would call Access To Work, I'm not sure what the equivalent is where you are. If you wanted something other than a Focus or a Brailliant, you could certainly get it. The Handy Tech displays are relatively common. The ALVA BC6 was common for a while. The VarioUltra, for example, you could certainly get it but you'd have to work a lot harder to get it because the people who supply it might not be on the approved list of suppliers and the displays are lot more expensive, so then the assessor says, well, why do you need a three grand display when a two grand display would do just as well. So, it's possible to get them but not all that common.

Tracy: What about the Orbit?

Matthew Horspool: Oh, the Orbit's very common. RNIB and Orbit have a very good relationship which means there are lots of Orbits around in the UK. That's by far, I think, the most common braille display now, certainly amongst entry-level braille users.

Ben Mustill-Rose: Thank you for that, Tracy. We've got Mike with his hand up.

Mike Mote: I have two braille displays and sometimes I like to use one just to keep practice with doing the braille, I have a Mantis and I also have a QBraille and sometimes I just want to use one over the other. Is there a way to have different JAWS profiles or something like that where you can set it up so that one would be married to one braille display and one would be married to the other?

Matthew Horspool: Sort of and sort of not. It's very complicated under the hood, actually. Some JAWS settings are stored globally, like for all braille displays, and some JAWs settings, without you even wanting them to, are stored according to the braille display. For example, the status cell settings, whether you want them to be or not, they are always assigned to the active braille display and not any other. So, if you wanted to turn status cells off for both braille displays, you'd have to go and do that separately for each display because of the way JAWS handles it. I can't remember what setting goes into which category and I think if you had a set-up where you wanted a braille profile, I think you'd be looking at copying and pasting configuration files and things like that. Above and beyond what JAWS already does, I don't think that's possible.

Ben Mustill-Rose: Thank you for that, Mike, great question. If you maybe want a bit more feedback on that, pop along to our Braille Bar next week.

Matthew Horspool: I just wanted to address one of Kawal's questions in the chat because it's a very quick one and it's a very good one and the answer's very simple. Unfortunately using the Orbit Reader, I haven't found a way of being able to emulate the modifier keys like I did on the Focus or the Brailliant. It does seem to be quite limited in terms of what braille displays you can do it on and sadly you don't seem to be able to do it on the Orbit.

Ben Mustill-Rose: Thank you for that, Matthew, and let's hand back over to Dave to wrap things up.

Dave Williams: Thank you very much, Matthew, for an informative session, some great questions, some great comments and suggestions. I'm certainly going to be trying that JAWS command to turn the braille translator on and off, so that's a great tip.

Thank you, Ben, for your help with the moderation this evening, very much appreciate that.

That's it for tonight, from myself, Dave Williams, and the rest of the Braillists Foundation team, bye for now.

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The costs of producing this episode were defrayed by a grant from the Activate Fund of the Winston Churchill Memorial Trust. For more information, visit wcmt.org.uk.