[Chairman: Mr. Bogle]   [6:08 p.m.]

MR. PRITCHARD: You all know Tomislav Milinusic. He's come to show you today the work he's done on mapping.

MR. MILINUSIC: Thank you. Essentially what you've asked for is how to equitably distribute future electoral boundaries. Of course, the basis for any redistribution would start with the population. So essentially the system is a demographic redistributor whereby you have total control over the various elements that make up a decision whether to bring a particular group of people into one provincial electoral district or another. At the basis of it is an enumeration area, which I explained five months ago is the unit of population used by Statistics Canada and by the government of Alberta.

So I came up with a solution whereby we have three modules to assist you in this particular approach. The modules essentially are first of all an information module whereby you ask questions regarding population that is currently distributed into the current PEDs. Another module is the actual redistribution process, which is a fairly complex process, but it will allow you, as I mentioned, to equitably distribute the population. The third one is to view them graphically, a choropleth. The word choropleth is basically a density distribution of that population, another way of looking at it. So ultimately your map looks fairly even in terms of variation from the mean. Let's say you're distributing a population into a hundred units. You'd of course expect the average area to have the population divided by a hundred. Any variation in that would show as a slightly different colour, and that is not good. You'd want a fairly even map if you want to continue this equitable approach. So these are the three units we will look at. Of course, there are printing and other utilities that I'll briefly demonstrate to you.

Essentially, we start off with a map of Alberta which has been digitized, and the districts, or PEDs, are currently on it. Now, you cannot see Edmonton and Calgary at this resolution, because they would be fairly small at this scale. What we have here is a mouse-driven interface to the system. We have "information," "print," "colours," "distribution," "census," "election," and "quit," in this case, but here we also have information relating to, for instance, enumeration areas. If I press any one of these, we would get enumeration areas shown in different colours. The colours are strictly visual at this point in this section of the image. We have the capability to zoom in or not zoom in at any given time. For instance, this is the Edmonton region. Again, it's very colourful, but it has a purpose. That is to separate the enumeration areas by the provincial electoral districts. You can zoom in in quite some detail. You can also zoom back to the previous one and the previous one and the previous one, up to 16 levels, I think. You're not likely to go into that detail. Basically, these are some of the features of the user interface.

Now, we have here three types of information needs. What we are looking at is the information module, you might say. The first one is enumeration area information. The second one is the division information; in other words, the PED. I call it a division. It simply sums all these dots and tells you statistics on them. Now, we obtained for this project 93 variables in Alberta that belong to what Stats Canada calls class A. They're basic information. There is a class B set that has, I think, over 130 variables that are a bit more detailed regarding socioeconomic information, such as income, education, et cetera. These variables, which I will show you in a second, are really basic in

terms of: how many single families exist in this particular EA? What is the mother tongue? Et cetera. Basic information.

Just to give you an idea, we will go into one of them. We have clicked at the EA; it says "EA info." We can take any one here. Okay. What we have, essentially, is that this particular spot that I just clicked has 220 people: 120 males, 100 females, total single 90, total occupied private dwellings 215, male parent, et cetera; average children per census family . . . This is the summary; however, we have more information. Total population, as I mentioned, is 220, and males, zero to four, there are only 10, et cetera: the breakdown by age up to 75. And, of course, we can do it both by the mouse, by touching here. I'm just showing you. Here, for instance, there are 120 married persons, 10 widowed, and no divorced or separated in this particular spot. I'm describing here strictly the user interface. That information can be obtained for this spot here instantly or for any other spot that you wish. For instance, here there are only 25 singles as opposed to a spot that is here – you just have to be rough – where there are 140. So quite a bit more people live here. Again, you can move this about. This is a window so you can access any of these 4,665 enumeration areas. We have 93 variables relating to these areas, and we can access them just instantaneously.

Now, for instance, here there are a number of spots. What we could do very easily is enlarge this, and we're here. Now, it's a bit hard to see and hard to tell what makes up these dots, so we've worked out something called urban/rural, and it tells you the type of EA this particular spot is. In this case a dot would be a city. It's a good idea to have a dot, because otherwise in a city you'd have a lot of these different types of symbols, and it would be a bit busy. There are Indian reserves, IDs and MDs, summer villages, SAs, county type enumeration areas. Again, by clicking backwards – here is the city of Edmonton; they're all dots – we can tell which of these EAs are rural, which ones are urban. This is according to Stats Canada's definition of rural/urban, and we can, if we wish, overwrite these definitions, but that's not . . . So it looks busy here, and normally you wouldn't be using this specifically to – you'd use this particular information when you're just trying to ascertain what EA it is. There is information as to number, et cetera.

As far as number, you want to know that this is 77. Now, 77 in the book on electoral districts may mean – I don't know this particular area, but it is the name of a particular PED according to a numbering system that was established. I think Athabasca is 1, et cetera. However, this information now on the EA is in terms of a unit spot. We can find out what the sum total is, how many people we have in this particular enumeration area, by going to division information. We know the 77 is Vegreville, total population 25,000, et cetera. All sorts of Indian reserves. There are none here, but there are 39 county EAs and 19 others, meaning summer villages and hamlets and so on. So this is strictly statistics on the area. It sums the total. Again we can find out how many zero- to four-year-olds in Vegreville, 12,645, et cetera, et cetera. There is mother tongue. Let me go further. You know, all the languages: Portuguese, Greek, et cetera. How many residences are owned, how many rented.

Now, why do we have all this information? I think the reason is so that we have total control over the redistribution. As I will show you later, when we do the redistribution, when it comes to deciding between two enumeration areas, whether they should go to this place or that place, and you're working on the premise that you're distributing equitably, then the more information at that level the better it is in terms of making a decision rather

than arbitrarily making it. So this is your second level of information. The first one was EAs specifically. The other one was division, sum total, and the one that is also included in this system is electoral information. Now, we have obtained through the office of the electoral . . .

MR. PRITCHARD: Pat Ledgerwood.

MR. MILINUSIC: Yes. Through his kind offices we obtained information regarding the 1989 election. Fortunately, it was already in computer form. We modified it, but it's available here, as well as 1982 and '86 election information.

Let's have a look at this election information. What we would have here is division 24; Camrose is one. If we went here – again you can just touch any one area and you'd get information. For instance, Ken Kowalski is in this one; this is Barrhead, number 3. It tells the distribution of votes, et cetera, by percentage as well. It says: voter turnout 63 percent; names on the list; rejected ballots; et cetera: summary information at this stage. We can choose a particular year. We have November '82, May 8, and March 20. I will go through this in a second. We have poll results; we should have.

This is a memory thing. Excuse me. We didn't check to see that this . . . Okay; that's why. Okay. It'll be just a second to fix this. We didn't check whether this computer had enough memory to run. There are some programs that were running in the background, and that is an important . . . Okay. Is it "mouse" here?

MR. GANO: It's in "mouse one."

MR. MILINUSIC: Oh, okay. Again it's loading all that data in memory so that you can access it instantaneously. Now, what we were looking at was that each particular PED had 83 or more polls. What we would have and will see now right away is the polls. Okay. So let us go to election information. I don't think it should crash now. Poll results – here we are. These are the poll results for this particular – could I call it riding, in this case? It shows poll 1; its poll name is Rumsey, et cetera. The breakdown is 24 votes for Sid Holt, 19 for Roger Nelson, and Stan Schumacher, 87 votes. That's all for this particular poll, and of course we have information on all the other polls. There happen to be 67 polls in this PED, provincial electoral district. So we have over 600 of these pages, you might say, covering the last election. We have also some of the information for the last two elections. We didn't think it was necessary to go through the detail of previous elections. So basically – here, let me go up and down. This is two, three, four, et cetera. Now, we also instituted I think a very interesting way of scrolling. Rather than scrolling through 67 of them, we skip suddenly by five or 10 until you stop it, and then you can instantly see it.

Remember, this is an information tool for making sort of decisions regarding the redistribution problem. What we have just seen here so far is strictly the first sort of conceptual module, which is information provision. Again you can zoom in and zoom out at any given time. That information module is available in the other two modules, which are the actual redistribution process, which is a complex one – I'll get to it in a second – and the choropleth mapping.

Let's have a look at the choropleth mapping in this case. We have here something called "census." Again it's empty, because this is a special module. We have 93 variables in this case, and we want to know what the distribution of these variables is

across the province. Show us a distribution map, basically; you know, colour coded, and of course using the 5, 10, 15, 25 percent above and below average intervals. Okay. For instance, these are the 93. Let me just look at nonofficial languages; Ukrainian, for instance. We know roughly that a double click will actually get you . . . Now, this is a different module. We can go back and decide to fill it; we will fill it now. Here we will have the distribution of Ukrainians who speak Ukrainian at all in the province vis-à-vis other Ukrainians, again within the context of that PED, not within any other distribution. It shows fairly well that central east Alberta has a higher percentage of Ukrainians vis-à-vis other Ukrainians in that region. We can do that, for instance, for total population. If we wanted to see the distribution, we just double press.

Now, this is the main tool that allows us to prove to the person who's doing the redistribution that indeed there is a fairly equitable redistribution, because the colour that they should expect out of this map is between those two ranges, whatever the percentage they have chosen as being the percentage they wish to enforce on the population in terms of the redistribution. For instance, this is total population. How does that work? Okay; the average . . . For instance, in these two areas you have more people for that area than anywhere else. This is the highest, and then we go to the next highest, which is in this area, et cetera. So if you have a map that has this particular colour throughout, more or less, then you've done a good, equitable distribution, according to the theory.

MR. PRITCHARD: That doesn't show the cities though.

MR. MILINUSIC: No, I haven't gone to the cities, and that you can zoom in on. Here we are going to zoom in – here is Edmonton, in this case – and we can do a fill-in. Again what's nice about this interface is that you can zoom in, zoom out, and access that information. Again, the city has a very high proportion compared to the average for Alberta, except in the northeast sections. This is based on the data that we have. I don't know if this is . . .

MR. DAY: This is showing density of population?

MR. MILINUSIC: No, not in city population. Density per average population; this is a bit different. There are two types of measures. One is actual population; you know, spread across the province. The other one is population, or whatever the variable is, vis-à-vis that variable. I will give you an example, I think. If we went to . . . Now, we were looking at population. We can look at political parties the same way, and I'll give you an example. This is census choropleth mapping, and this is election choropleth mapping, meaning political parties in this case. Okay; so let's do the election one. We have here "percentage voters' turnout." If we wanted to see that, or if we wanted to see "Liberal Party percentage of vote," New Democratic, Independent, Social Credit, et cetera . . . Let's say – I don't know – whichever you want. I am impartial, but it's . . .

MR. DAY: Liberal.

MR. MILINUSIC: Liberal. Okay, here it is. We won't look at the whole of Edmonton, although we could. Let's do a fill-in on Edmonton. So this is the distribution of Liberals vis-à-vis Liberals, not vis-à-vis anybody else. For instance, they did much better here, according to the data, on average for the province,

than anywhere in these areas that are blue. Blue is sort of negative in that. Now, it takes . . .

MR. GANO: It doesn't mean that they won that riding.

MR. MILINUSIC: No, it doesn't at all.

MR. GANO: It simply means that they were stronger in that riding compared to another riding.

MR. MILINUSIC: Exactly, to themselves. Now, what we should have as a second sort of screen is exactly that type of information; that is, actual percentages of total votes. That would be very useful. We didn't include it here because of the particular nature of the way we were doing it, but that should be, I think, in the next . . . Okay.

So what we have, basically, is the choropleth capability. We can look at Liberals, for instance, for the whole province, and they may be doing better, relative to themselves, in the south as opposed to the north. So this is relative to that same variable, but that is important, because for choropleth mapping – I mean for redistribution – you want the information to be relative to itself so that you have a fairly even-coloured . . .

MR. PRITCHARD: There's something wrong with your map, Tomislav.

MR. MILINUSIC: There is? Okay.

MS BRUCE-KAVANAGH: That southern part.

MR. MILINUSIC: That southern part? No, remember this is strictly relative to . . .

MR. DAY: This is relative to themselves. Frank almost got excited there.

MR. MILINUSIC: Yes. It's very confusing at first; I agree with you. But I think it shows the information in a more accurate way relative to that particular party. I mean, they'd love to know about this one as opposed to, you know, other information which they know.

MR. GANO: So if they got . . . I'm sorry; it's this whole concept. So if they got 100,000 votes in total across the province, this would be the distribution?

MR. MILINUSIC: Exactly, exactly. That's exactly what it would mean. It would mean the 100,000 – how is it broken down by these particular areas? And that is the same concept. I mean, all this is really background information. What you really want to do, having redistributed Alberta, let's say, into a hundred units, is see how does the map look for total population. That's the first thing you'd worry about: is it fairly evenly coloured? You know, can you live with it? Of course, if you looked at mother tongue for that same one, there's no way you're going to be able to equally distribute people.

MR. CHAIRMAN: Just for interest, Tomis, show us the other two parties, would you?

MR. MILINUSIC: I was waiting for that. There are only two other parties? I'll look at New Democrat, double click, and we'll fill it. You probably know the results.

MR. DAY: This again is their distribution relative to themselves.

MR. MILINUSIC: To themselves. Exactly. Now, as I mentioned, I think we should also have the option to see it relative to the whole thing. We didn't do that because it's not relevant to this project directly at this time.

MR. PRITCHARD: How would you do that on a map? I suppose it would break it down into . . .

MR. MILINUSIC: I'm sorry?

MR. PRITCHARD: How would you do that on one map, show three parties and their breakdown?

MR. MILINUSIC: That can be done as well.

MR. PRITCHARD: It can be done? Or three, or whatever?

MR. MILINUSIC: Yeah, awful close. Sure, it can be done. I was thinking of putting statistics, moving this almost like a three-dimensional map with sticks. That's one way. But there are techniques. I'll show you that.

Anyway, what we've seen so far are the two modules that are strictly information and the information basis for any scientific, let's say, redistribution of population.

We will now go to the other one, which is the heart of the system, and it's fairly tricky. I will attempt to explain this one. Let's take a small area here. The reason is . . .

MR. CHAIRMAN: Just a minute. You were going to show all three parties. You only showed two.

MR. MILINUSIC: I beg your pardon. I will go instantly to "elections" here. There is Conservative, right? Okay. You see, pressing this one gets us to the earlier zoom level.

MR. DAY: I noticed on that Liberal one, too, the colours were fading. Is that anything?

MR. BRUSEKER: That's just your eyesight, Stock.

MR. MILINUSIC: I have nothing to do with it.

So this is what may be termed "strongholds" or something like that. It's strong here, anyway, in these spots.

MR. BRUSEKER: Where?

MR. MILINUSIC: In these areas.

MR. SIGURDSON: Chinook and Smoky.

MR. MILINUSIC: Is that correct?

MR. DAY: Now, this is for which party?

MR. MILINUSIC: PCs.

MR. BRUSEKER: They still have two strongholds? That's amazing.

MR. MILINUSIC: Well, have you looked at the data in that fashion? I don't know. It's based on just what we have. But it's interesting to look at the data slightly differently from . . .

Now, the heart of the system is really the next module, and it's fairly complex. Incidentally, we can at any time print any of these maps, and I can do it now.

Well, let us do this redistribution in this area. We have some weak colours, but that's all right. Now, what we do is the following. We say we want to do "redistribution." Okay. It asks you which electoral division map you want to use, because remember this is a tool so that in 10 years' time, hopefully, we will still be able to use it because you would have gone through several elections and each election would have been one of these green ones. The map would have changed each year, so you can choose the particular map that you want to start with. The reason I say that is that what you're doing, essentially, in this "redistribution" process, is assigning EAs, enumeration areas, to a particular division based on a process that I will explain in a second.

So, say we want to use the 1989. Do you wish to create a new division map, basically? Do you want to do that? The reason you ask that question is that sometimes you may have spent two days working on this and the third day you want to edit something, you want to change a couple of them. So you don't want to start a new one; you want to edit an old one – you know, an "attempt." So you say yes. How many electoral divisions are required? This is important, because that is the number that it is going to divide by whatever variable you're going to choose as your equalizer. So let's say we want 100. It says, "Choose variable to equalize upon." In other words, you may wish, at this point, to limit it to a particular linguistic group and so on. But very likely you're going to say, total population or . . . Anyway, I assume it's total population. What percentage deviation do you wish to enforce? Remember, we will allow leeway; you can't exactly divide the population in a hundred units. So that leeway is how many, plus or minus 5 percent, 10 percent, and so on. I'll explain a bit later, because it'll change. Let's say 15 percent. Now, please start the name of the files containing this "attempt." So we call it – whatever; you give it a name.

Now what happens is the process of redistribution. I will explain. First of all, we go to "distribution". Okay. This is a totally new set of . . . Okay, here is the process. You'll notice that these are all now white. They're white because they have never been redistributed. You know, this is your universe; you can now assign: I want this one to be in 1, this one in district 7, et cetera, et cetera.

So this is the process. This window is your control centre for that process. It saves the variable names: "total population," "division name." We haven't defined it yet; we didn't give it, because Athabasca slash something else may change now to North Athabasca. Let's say you're doing North Athabasca – but it always starts with "division 1," because you're starting from scratch – you can change that name. It says, "Current EA: zero." We haven't assigned anybody anything, and the cumulative is zero. However, for the population we anticipate 23,619 persons to be distributed for this area. If you're 5, 10 percent, that's fine, because we chose 15 percent as being the limit. It tells you the maximum that you're allowed, really, to go before

you break your own rules – because you decided on 15 – and that's 27,000, and the minimum is 20,000. It will tell you that it's out of range, because you haven't reached that area.

That's what we'll do now. We will basically move this fellow here, that spot of the user interface, and we'll assign, let's say, this one. Okay, suddenly we have 305 people added to our number 1 at the moment. You assign it to this one. You just touch it. Okay, so we've reached only 1,545 people. No problem. We can zoom back and look at that area and continue this process. However, we will stop here. We will say, "Well, I want to look at another division." Which electoral division do you wish to edit now? You say, "I want 2." Okay. So now it does some recalculation. Now, I don't think you can see the colour, but these that were assigned are yellowish. They've been assigned. So now we're talking about number 2. Number 2 also needs 23,000 people, but there is nothing assigned. So I can assign this one and this one. Now, I want to, you might say, steal this fellow who is number 1, and put him as part of 2 for some reason. Before I do that, I want to find information on that person, so I go to "EA information." I said person; I meant . . . So I know that there are 370 people, et cetera, and that – I don't know – there are so many male, female, et cetera.

Now, that's where the sort of very accurate capability of this system comes into view. What you are doing is scientifically making judgments as to where the division should occur because you have all the information possible.

MR. CHAIRMAN: All right. On that point. You have municipal boundaries. Do you have trading areas?

MR. MILINUSIC: No, no trading areas, but this is a good point. What we need at this point – you're right; we're still lacking certain information such as rivers, lakes, infrastructures of highways, roadways. That is what we wanted to do in this project as well. You have administrative boundaries of all sorts, and there are quite a few of them available.

Now, to implement something like that requires – this took five months to get to this stage, and the work that we did was specifically to get to the redistribution. We have an editor here that allows you to draw your boundaries, even copy boundaries from old boundaries, and put them in. That is available, and that's what I can show you as well.

MR. PRITCHARD: In essence, Bob, that would be the next part of the project.

MR. CHAIRMAN: Yes, I understand.

MR. MILINUSIC: Yes, because it is quite complex in that period. But basically we now have information on that, and we're going to move this fellow, who is assigned already, to go over to – you can assign and deassign. Okay. Now, it's complaining here. It's saying: this EA belongs to division 1; do you wish to reassign it? So we say yes. Now it becomes part of that one, and it's automatically calculated here.

So remember that this process is a tedious one. You can't redistribute the 4,665 in an afternoon. It'll take a couple of days. You will be doing a lot of trading in between, because, as you mentioned, you have a river here or the road actually is not going north-south as you thought it was and so on. That information is called overlay, and we should, I think, in a system include this information so that you can even make more proper judgment.

However, what's interesting here is that you can actually change the variable in midstream. You've decided that you're doing it on total population; that's fine. But if you were to look at the distribution, if you felt like it, for males 20 to 24, it instantly does the recalculation and tells you that for that one we only need 1,119 because that's the average for the province if we were to divide it by a hundred. So really what we're doing here is choroplething without actually looking at the distribution map. We could even change the percentage at this stage to enforce for that particular variable. It's a multivariable, multidimensional spreadsheet of assigning variables. So we can enforce 10 percent, and if we do, then everything changes here, and it'll tell you that – well, you're out of range because we're still below. But when you're over, that's when the problem starts.

And we can do the same. We can give it a name at this point, at any time. Number 2 – at the moment it said "not defined," so we can call it whatever: Athabasca-South, if that was the case. So it's now Athabasca-South, and it's all saved in memory, and it'll print reports regarding the current redistribution.

So this is the concept behind it. Essentially, let's say, we can edit number 1, which we have seen earlier, and suddenly they change colours, and it gives you the information you wanted: total names at this point for that particular variable. So the whole game behind this program is that you're given a number of dots, you electronically assign them, see whether they're coming close to your average, and having done that successfully – you know, having always been within range because you have the ability to move EAs from one area to another – having completed that process, then you go to the next process, and that is start doing the actual mapping borders, putting the borders around it.

Now, there are two things about putting borders around it. This system is a guide – you can print them on the laser printer – for a more detailed, let's say, cartographic decision on where exactly the borders should be. Now, let's assume that we do have rivers and roads and infrastructures information. That is great, because you can promote a line – let's say it's a road – from one file into your file that describes your borders. In other words, you don't have to digitize a river or a road or anything like that. You just promote. It's here: "pro," for promoting a particular segment. That is a major sort of feature that will assist in quickly doing a fairly detailed but not final – I must sort of mention that – not final map of how it looks in terms of the big maps there. The information that is laser printed should go then to the Alberta Bureau of Surveying and Mapping and let them do a proper cartographic sort of division. There should be very little difference between the two, because of the information.

Now, the 1 to 1,000,000 scale data that has the lakes, et cetera, infrastructure, townships – for instance, all the townships will be in that. These are overlays. These are done by ABSM, and if we had them, then their job would be even easier, because they would just follow the printed screen and then they will do an official map that is permanent, as opposed to one that is here.

So basically the heart of the system is the redistribution. You cannot do it any other way. I looked at that. There are several formulas and so on that look at distributing a set of points, let's say, so they're equally divided and so on, but they do not take account of any of these subtleties in the population and in the demographics. That's why you have to do it by hand, basically. This is really simply the tool to quickly access that information as opposed to looking it up and so on. But at the same time, you can justify quite a bit with it because the information is

based on, number one, impartiality – it's the nature of the world – and number two, it is very fast and accurate. I believe that if you were to redistribute, let's say, the current 83 divisions into a hundred, it shouldn't take more than a couple of days to do the process. And it is fast. As you see, we can redistribute.

Now, I haven't shown you these three items here – oh, excuse me. You have information on division and specific EAs as well, so that at any time when you make a decision should this go here or there, not only do you have information on what this particular EA is, which is what I showed you earlier, but what is the sum total of this particular division if we move it to another division. So you really cannot complain in terms of how much information you have. You have all the information to do at least a fairly accurate redistribution based on these 93 variables. If you wanted more, there are more, but they're not at the EA level, I must also mention. And not every dot you see here actually has information that Stats Canada will reveal.

MR. GANO: Could you explain that a bit?

MR. MILINUSIC: Yes. There are certain places – I don't know; small hamlets – that are fairly separate geographically, and they have to be one unit, so they are called a particular dot in our system. But because there are only 25 people, they cannot really give you all the information on them. There are certain policies at StatsCan. Even when you do averaging, when you do summation of StatsCan data, you'll always find a difference of 40 to 50 to 60 people for the whole province, mainly because they're rounding errors. They're really not rounding errors; they're simply purposely put in. It's within five people, so that you never know who is who.

Before I continue on the digitizing aspect, in anticipation of some of your questions, I think another thing that can be done is – the postal code happens to have a geographic location, a physical location. So instead of these dots, which are also geographic locations, if you had postal codes for whatever people, in your case in terms of actual people who are voting, then you can map them very accurately down to a block-face level. That is the ultimate in terms of a statistical information system regarding electoral districts. But that implies many things – you have to have that data, et cetera – and it's huge, because I'm sure there are lots of electors.

Let me briefly show you an example of editing. This is the Edmonton area. Let's say we don't like this line. No. Let's add a line. In this case I've reduced it here. I want to create a new district here. It's doing a bit of calculation. Okay. Here is the digitizing. You would have dots of the same colour that you have assigned recently. Okay? So that would allow you to say, "Well, this is a good area." And it always clicks on. So now you have a new area. However, these do not form part of the old area, so you have to promote them. You go to "promotion," and I can do that and promote that area as part of the new map. For instance, I want to promote this one. Here we are. You see, it changes colour. It simply is saying, "Include this in my new map." I don't want to redraw this because it's accurately drawn. So that is a promotion function. Basically, what I'm doing here is showing you the digitizing feature once you have established your areas and how you can then create new maps. If you had, as I mentioned, the rivers, et cetera, then you would use their boundaries as the natural area for this.

I will do a deletion now, show you a deletion of these lines that I've just added. Now, it always takes a bit of time because this is a most complex process. All I have to do is touch. I

don't even have to touch for it to know that it's the one to take out, and you hit "enter," and they disappear. So you can edit and play with it. These are tools, really, fairly technical in this case, so I won't bother you with them. We will quit this redistribution, and again we will go to the earlier.

Now, just to show you some of the print mechanism here, we have "choose a printer." We've created quite a few printer drivers so that this system . . . All these are printers. I think there are 160 different types of printers, so if you outgrow this one or get another in another office, you can choose the appropriate printer. It will print on the laser. I'll just do a quick print here of something, including choropleth mapping; we'll do that. For instance, you wanted those parties. Here we are. Let's see. We'll include numbers; no, we should have excluded them. Okay. I'll send it to the printer. Now you can print in – it does it in black because of the nature of this particular program. This is a black and white printer, so you couldn't recognize the colours. It's printing now. We'll print this without information.

That is basically the system in its three components. There are other minor things, changing colours and printing particular reports, which we have to look at. So this is basically the system. If you have any questions on it, I'd be happy to answer.

MR. CHAIRMAN: Questions?

MR. DAY: Can you basically, then, take that mouse and on the map of Alberta carve out a constituency of any size, call it a constituency or an electoral area, hit the button, and up come your 93 variables?

MR. MILINUSIC: Yeah. Absolutely. That's the reverse process. Yeah. Absolutely. That's the nice thing about it, because then it would have many other uses. You know, you want a hospital district redistributed, or you're creating, whatever, a new authority. It's very easy to do. Specifically, all the elements are there to do it, and yes, you can, but this was built very specifically for the redistribution without one or two. In this case it just does this. You can, and what is so useful about this program is that it can be adapted to do other things for you.

MR. DAY: Just on a very specific point of information, Tomislav, could you hit Vegreville again?

MR. MILINUSIC: Is this Vegreville?

MR. DAY: I don't know.

MR. MILINUSIC: Okay. Let's see.

MR. LEDGERWOOD: Seventy-seven.

MR. MILINUSIC: Okay. So if I don't know Vegreville, I say "number," and that's 27, so I'll zoom back. That's what I'm doing now, and I should get Vegreville.

MR. DAY: You'd crunched out a figure, and it sounded out of whack to me. I'd like to . . .

MR. MILINUSIC: Probably. That's always a possibility. Thank you.

MR. DAY: Not that it matters for Vegreville, but it just shows it's always possible to lower the machine.

MR. MILINUSIC: Okay. You're right. Seventy-seven. Okay. Oh, 78. It's probably this fellow.

MS BRUCE-KAVANAGH: Seventy-seven.

MR. MILINUSIC: Okay; 77. So let's go back earlier. You'd recognize it. In terms of enumeration?

MR. DAY: Yeah. Okay.

MR. MILINUSIC: In terms of population?

MR. DAY: First of all, population of.

MR. MILINUSIC: Oh, here it is. Okay. So let's do population. I have 25,735.

MR. DAY: Right. Then males, I think it was, zero to four years old?

MR. MILINUSIC: Okay. I have 12,000.

MR. DAY: Half the population of Vegreville is zero to four.

MR. MILINUSIC: No, that's too many. Sorry, it's 775.

MR. DAY: Okay. You had said that before and I thought, whoa, something's out there.

MS BRUCE-KAVANAGH: I thought there were a lot of young males.

MR. LEDGERWOOD: How are we ever going to get their vote?

MR. DAY: Okay; that helps. Thanks. So you're machine is correct.

MR. MILINUSIC: It is; I didn't read it.

MR. PRITCHARD: His eyeball is crooked; that's what.

MR. MILINUSIC: I didn't have my glasses.
   But also what is interesting is that you can touch number 70 and find the comparative population. They have 740 as well. Now, let's see number 59; they have 705. So it's really interesting that it looks evenly distributed, but of course there are areas that are not. In this one we have 1140, which is quite a bit more. So I will go in here.

MR. CHAIRMAN: Okay. Any other questions?

MR. BRUSEKER: Tomislav, if you set the population to be the primary factor and you give it a variance of zero, would it automatically drop for the entire province?

MR. MILINUSIC: No, it can. There are, as I mentioned, heuristic programs that do that, but then it would be really . . . If you give it a zero, you would have to reach that zero, and it's

going to be very hard because zero is really next to impossible. You can't divide EAs into zero.

MR. BRUSEKER: You said 5 percent.

MR. MILINUSIC: Five percent is – yes, you can do it. But you have to do the work. The distribution is done really by somebody.

MR. PRITCHARD: You have to use that mouse to move around and touch each of those, and then the numbers vary.

MR. BRUSEKER: The computer wouldn't automatically redraw the boundaries itself.

MR. MILINUSIC: We can do that, but that would not really be meaningful, because it would be cutting across everything, old boundaries and so on. So what you want to do is sort of – it's a mixture of maximum information, maybe information overload, and . . .

MR. BRUSEKER: It's your word in science.

MR. MILINUSIC: . . . a decision to keep as many of the old ones as possible. You know, you don't want to suddenly break up a small group into five different areas. That's why you have information on how it used to be, sort of in the olden days before the redistribution. So you really have maximum information for decision-making; there's no doubt about that.

MR. CHAIRMAN: Anyone else.

MR. DAY: You can call up any EA and show how many people voted PC, Liberal, or whatever?

MR. MILINUSIC: Not EA, no. I'm afraid not. That would be, as I said, almost . . .

MR. DAY: Sorry.

MR. MILINUSIC: PED, provincial electoral . . .

MR. DAY: Yes.

MR. MILINUSIC: Any on these.

MR. DAY: You can do that by poll?

MR. MILINUSIC: Yes.

MR. DAY: I thought that was true.

MR. MILINUSIC: Yes, I have seen that.

MR. DAY: Right. The question that I had was: will you also show, or is it loaded in there, the addresses of the people who voted?

MR. MILINUSIC: No, it isn't. Specifically, you know . . .

MR. DAY: It's not a major factor. I just wondered if you had that in.

MR. BRUSEKER: It's called secret ballot.

MR. GANO: He wants to get at the electors list.

MR. MILINUSIC: If you had the postal code, then we would be able to do quite a bit of more work.

MR. PRITCHARD: You could put that in.

MR. MILINUSIC: Yeah. If you gave me the postal codes only, you know, that there were five postal codes T57 – without what they voted, because you wouldn't know anyway – that would be quite a big step in terms of information. I think that's quite a major step.

MR. CHAIRMAN: Any last questions to Tomislav? Okay. Thank you.

MR. MILINUSIC: Thank you.

MR. CHAIRMAN: We will reconvene in the meeting room briefly.
Earlier we had an informal discussion about trying to wrap up the hearings in late June and then meeting. Now, when the hearings are being held, if one or two members are away, the committee can handle that, as we did during our past hearings. However, when we sit down to work on our conclusions, we all should have our calendars free for the same dates, keeping in mind we're cutting into summer schedules. I thought it would be helpful for Bob, who's trying to put this together for us, if we could just go around the table and get an indication of who has time blocked out now so that when we come back in about three weeks' time, we'll try to nail down some dates, if you know. If you don't know, if you could give Bob a call tomorrow. Let's start with you, Frank. Do you know?

MR. BRUSEKER: Sure. I think we have booked a holiday from about July 21 till about August 10 or so, a three-week period in there.

MR. PRITCHARD: Pat.

MRS. BLACK: We would like to be gone from July 15 through the end of August.

MR. PRITCHARD: Stock?

MR. DAY: I haven't blocked anything, Bob, so I've got some flexibility there. The kids will all be working.

MR. PRITCHARD: Tom?

MR. SIGURDSON: I have nothing booked.

MS BARRETT: I'm booked in July, but I would come back if I had to.

MR. PRITCHARD: For the month of July, Pam?

MR. CHAIRMAN: Would this help?

MS BARRETT: No. I don't need the calendar; I already know.

MR. CHAIRMAN: I'm away for a week starting on July 7 through, I believe, the 13th, and then not again until the last week in August. So we should find out about Mike as well.

MR. PRITCHARD: Yeah. I'll get Mike.

MR. DAY: That last week in August, if I was going to target a week, that would be the most likely one for us.

MR. CHAIRMAN: When you would be away?

MR. DAY: Yeah.

MS BARRETT: Well, it sounds like September is the time to do the meetings.

MR. PRITCHARD: Yeah. July 7 to . . .

MRS. BLACK: You see, the first week of July we have the Stampede in Calgary, which doesn't sound like a lot, but it's a big thing. We're pretty well on board for that.

MR. PRITCHARD: Maybe there's something July 1 to 7, depending on where Mike is going. But the rest of the summer, even from this schedule . . .
   Well, I'm sorry. If Pam . . .

MS BARRETT: No, I said I'll come back.

MR. CHAIRMAN: No. If we're talking about one meeting in July and then waiting until September, why not leave your holiday uninterrupted and begin the process in early September? But then we've got to block out time.

MS BARRETT: Well, that would be my recommendation, Mr. Chairman. I would think that what we should do is see if that's possible now and get the commitment as soon as we can from everybody.

MRS. BLACK: I don't see why we can't go flat out in September.

MR. SIGURDSON: I'm already committed with Leg. Offices for a period of time.

MR. CHAIRMAN: In September?

MR. SIGURDSON: Yeah. That's right.

MR. CHAIRMAN: When you say flat out . . . You know, I'm assuming the process is we'd meet, I'll use as an example, a Monday afternoon and a Tuesday morning.

MRS. BLACK: Why not go Monday to Thursday?

MR. CHAIRMAN: No. Well, because if you . . . We'll see how quickly it goes.

MRS. BLACK: Get it done.

MR. CHAIRMAN: It'll get done all right; somebody will get mad and walk out.

MRS. BLACK: I'd never do that.

MR. SIGURDSON: No, but you might force others away.

MR. DAY: You could get mad and stay.

MS BARRETT: When does Leg. Offices meet?

MR. SIGURDSON: There are a number of conferences. I'll phone Bob Pritchard.

MR. CHAIRMAN: What I was going to suggest is that we have a brief meeting on May 7.

MRS. BLACK: Is that a Monday?

MR. CHAIRMAN: Or maybe we don't need to wait that long.

MR. SIGURDSON: That's a long time.

MR. CHAIRMAN: It's a long time. I was looking for a Monday?

MS BARRETT: Don't I show something else in April?

MR. CHAIRMAN: Well, the 23rd-24th is a holiday, isn't it?

MR. PRITCHARD: On the 23rd the House reopens.

MS BARRETT: Yeah, we're back on the 23rd.

MR. DAY: It's the week before, Bob.

MR. CHAIRMAN: All right. We're back on the 23rd?

MR. DAY: Correct.

MR. CHAIRMAN: Well, then let's tentatively hold the 23rd for a meeting and at that time try to finalize our dates.

MS BARRETT: Can I tell you something already? I mean, not that it's critical, but I do note that that's the evening of the ATA/MLA dinner.

MR. BRUSEKER: Right. Good point.

MR. CHAIRMAN: It's on the Monday evening, is it?

MS BARRETT: Yeah.

MR. CHAIRMAN: All right. Well, what about the Thursday of that week?

MS BARRETT: I don't show anything.

MR. PRITCHARD: Yeah, April 26.

MR. CHAIRMAN: Could we try for the 26th with the intent of coming back and finalizing our schedule? We'll have a tentative list for late June, assuming that's all predicated on the House, and we'll have dates in September.

MS BARRETT: Sounds good. And did you say to block May 7?

MR. CHAIRMAN: No.

MS BARRETT: No.

MR. CHAIRMAN: Well, why don't we hold it just in case.

MS BARRETT: All right.

MR. CHAIRMAN: Yes, I'm sorry. I'm giving you the wrong signals.

MR. DAY: Hold the 7th?

MR. CHAIRMAN: May 7 hold; that's a Monday evening.

MR. PRITCHARD: Have a meeting on April 26 and hold May 7 for a possibility.

MR. DAY: No other meetings between now and the 26th, correct?

MR. CHAIRMAN: No.

MR. BRUSEKER: Bob, you've tabled that interim report now. Have the House leaders met yet to discuss it at all? I haven't heard anything. Pam, do you know?

MS BARRETT: Well, I wrote to Horsman and asked him when a motion would appear, and he said, "Soon."

MR. BRUSEKER: So is Christmas.

MS BARRETT: I assume that Jim means what he says.

MR. CHAIRMAN: It's coming.

MR. BRUSEKER: Within the week, then, you suspect?

MR. CHAIRMAN: Well, you heard his response the day after we filed the report. He gave a response virtually committing the House to a fall sitting.

MR. BRUSEKER: Oh, yes. Right. That was in response to a question by Gordon Wright, I believe.

MR. CHAIRMAN: Okay?

MS BARRETT: Motion to adjourn from this freezing joint.

MR. CHAIRMAN: All in favour?

MS BARRETT: Run.

[The committee adjourned at 7:16 p.m.]