

Male Speaker: Welcome to the new chart features and advance technique discussion. My name is Steven Gibson and my colleague is *[Inaudible]*. I have worked at IBM for IBM Cognos for over 14 years, I primarily focussed on reporting and charting, and I worked on products which include Report Studio, Powerprompts, Cognos Query and Prompt two and a prompt two web reports. *[Inaudible]* has been to IBM Cognos for seven years and she has worked on Report Studio, Analysis Studio and Cognos Visualizer.

The agenda for today is to look at new features and techniques in Report Studio 8.4, some of the highlights are going to be easy ways to put micro charts in cross tabs and why you would want to do that, nice ways to create heat maps, how to set up your charts for presentations and we are going to talk a little bit about a new chart we have added in this release called the *[Inaudible]* chart. So, preview of some of the things we are going to show you how to create are a heat map which we see here on the left, the degree of redness gives you some indication of the measure that shown in the cross tab, this was created with Cognos 8.4, and kind of a preview of the presentation quality graphic so that you can do in 8.4 shown on the right, we have a nice pie chart with a nice generator background and shaded gradients and stuff, so we will show you how to do both of those today. So, what we have done Jenn and I is to invent a new data source and a new company we have got a little bit tired of the traditional go sales and retailers company we found it to...we have seen it too often, so we invent that are own little thing and we thought that everyone would love candy, so we invented Darren's Dandy Candy and the story to it is Darren's Dandy Candy sells candy to grocery stores across the world, its multinational, the VP of sales is one of the players in this it is Mrs. *[Inaudible]*, the regional manager is Mr Snickers and the professional report author is Mr. Smarties, so we are going to be dealing with these three people primarily the last two, so lets get straight up into a demo. What we want to look at is the fact that Mrs. Bulmow as the vice president of sales has been getting on Mr. Snickers case, because gross profit she feels has been decreasing across his region, she wants to know what is going on and what is he going to do to fix it, so Mr. Snicker says fine I have to find out if first of all if it is really true, and if it is a global trend or if it is just my region and then we will see what I can do to look into it, so we are going to jump into Cognos IBM connection here and I will go into my package run reports to you, Mr. Snickers has a nice report that shows gross profit across time across regions, so here is Mr. Snickers gross profit report, his region happens to be Northern Europe and the countries in his region are Finland, Norway and Sweden, so we are looking at the revenue and reports to express which is his primary user interface, because he is a line up business manager, and he can see the numbers here and he has had pretty good revenue, there are some negatives down here at the end and some small ones, but it is really hard to see, it is really hard to see what is going on, we cant see any trends, you cant easily compare with the other regions, he just he cant really see what is happening, so he realizes that he needs some help from Mr Smarties and the BI competency center, so he goes to Smarties and says "What can you do to help me see what is going on with my revenue?" Smarties says "No problem, what I am going to do is I am going to add some trend lines to your cross tab, the trend lines will help you see how your revenue has been trending and how the revenue in other regions have trended and

that should give you an idea of what is going on and at the same time I want to take away your nice numbers in your cross tabs, so you can see the exact values if you need to."

So, he lets Smarties go of and do that, so Smarties will work in the *[Inaudible]* professional not express, so you can see here that Smarties is *[Inaudible]* professional with exactly the same report, so now we want to add trend lines into this cross tab, well it turns out that in *[Inaudible]* A4 the new feature called insert chart for row data takes care everything for you, we pop up the chart dialogue here and we initialize it to the micro chart section, so trend line is a micro chart and you can pick the one you want, so in this case we are going to choose line with reference line, the reference line will be a mean press okay, what that does is it answers chart in the rose, that is going to graph all of the revenue for all the quarters across the cross tab, it sets up everything for you automatically, and if you size this down you can get an idea of how big that chart is going to be, it is going to be a tiny little micro chart, we have done that for country here, so we will see the trend for each individual country, but lets also add it from Mr. Snickers here to the overall area, so you can see how his overall region is doing as well, so you can see how that looks and probably look a little bit better if we center this vertically, so we will just press that center button here we go, so now I would say this and Mr Snickers can open it in reports to express and see how that looks, note that I have added advanced features easily in *[Inaudible]* professional, but it is going to open just find the reports to express and Mr. Snickers will be able to getting you to work with it, so lets have a look at that.

So here we are Mr. Snickers is looking at his report and he can see wow! I can see how things have been going, so France, Germany, United Kingdom, they have all sort of been trending around the mean been fairly consistent, there is a little bit of spike in Canada and Mexico, because I guess they really like candy, but if you look at his region Northern Europe compared to the other ones overall it is trending down, there was an up one, *[Inaudible]* but it is still quite down and if we look at the individual countries we can see that in fact it is Norway the problem, we can quickly see Norway is going down and the other countries are fine, so having the trend line there allowed us to quickly see what is happening, how things are trending and we still have the overall numbers, so if we want to see well this point here in the last quarter what was it and we can scroll over and we could see what is actually is this one here, yeah Norway has actually lost \$2.7 million. So, what are these micro charts *[Inaudible]* tough to you kind of a pioneer in this space spark lines are data intensive design simple word size graphics, they provide a lot of very rich, very fast information in a small space, when you have a large cross tab like Mr. Snickers have with his gross profit across the number of quarters inserting a spark line into the rose can help you very easily see what is going on, we make it easy to do that for you by giving you the right click menu option to insert them and the bottom of this here you can see there is another example of the spark line, there is a also a win lost chart in the middle, and a spark bar as well, you have many options just to see what ever needs your users require, so now in the second part of the demo Mr. Snickers knows he has a problem and he has got to figure out what it is to satisfy *[Inaudible]* he believes that it could have to do with discounting in Norway or in his region in general, his intuit knowledge of his business from day to day tells him that is a good place to look, he

doesn't know for sure, but that is a good place to look, so he is going to open his report that looks at discounting and reports you express and see what he can find.

So here we can see his discounting report, its broken down in a quite level of detail here, I have a context filter, so that I am only seeing data for northern Europe, so the cross tab here is shown for his region only and it is page by quarter, so the first page shows 2008 Q1 and we can look at our wonderful product brands like imagine it is your fruit bars and we can look at very interesting products like Cherry olive delight and the Chocolate Massacre and see how they have been doing for discounting and the discounting well some of them looks high, it doesn't look unusually high, you can page down a little bit and look at some of the other ones and they seem okay too, now it is starting to get a little bit high in Q3., but it is kind of hard to see this is at a difference between for a particular product or particular brand, it is kind of hard to tell and you know if he wants to look at another region he can switch to North America and see how North America looks and it doesn't seem vastly different, so again he says to himself well I can exactly what is happening quarter to quarter on discounting, but it is kind of difficult for me to identify where the problem is and exactly what the problem is, so I think or so he thinks he needs to go back to see Smarties and the BI competency center, Smarties says you know probably the best way to visualize this is with the heat map, I can create a heat map for you based on discounting for all of the countries and the different across the different quarters and you should very quickly see if there is a normally in your region fantastic, so lets watch Smarties build a *[Inaudible]*, so Smarties is in professional and he is going to start with a cross tab, we are going to use the cross tab in this case as our basic structure for heat map, so first thing that Smarties is going to do is say "Well I want my heat map centered on the page vertically and horizontally" that is easy to do, he also wants to put their wonderful corporate logo in there that I spend hours and hours and hours making, so lets do that, and the way we are going do that is another interesting perhaps under used features called a lay out component reference, so I drag in this lay out component reference and I can pick out the header from my library, I have a report that I call a library report that has a whole bunch of reusable components that I like to keep a head line, so they don't want to keep recreating them, so I just picked the title area and then I get the same title area had in all my other reports that is just kind of a neat trick as in aside, but lets get back to the heat map. Okay, for the heat map how do we want this to look, we want countries down aside, so I am going to pull over here the country level and then I am going to want to have quarters across the top like that, then I want to have discount for the cells, because that *[Inaudible]* heat map is going to be based on it, okay so right now it just looks like a normal cost tab and if I run it you can see it is just a normal cross tab and you can see how hard it is to identify what is going on, so what we are going to do is we are going to build this on a couple of stages, so I can show you how it works. The very first thing we are going to do is, we are going to apply conditional styles to the cells, I am going to use the new and wonderful conditional style *[Inaudible]* so I say the cells of the cross tab here I want to be conditionally styled, and I want to be an *[Inaudible]* range based on discount, it brings me into this UI here, so this allows me to specify ranges of values and a style color associated with each one, so let's start with 5% and note I can type 5% in here and the same figures out exactly what I mean, I can also type .05 it is whatever you are most comfortable with and I know that 5%

discounting or lower is actually really good, we will say that is great and 7% discounting, 7% to 5% is also good, anything below 10% is okay that is acceptable that should be the maximum that we ever discount in terms of a sale situation, so anything above 10% is not good, so if I have between 15% and 10% that is going to be not good and if I have between 30% and 15% that is less bad and if I have pardon me if I am above 30% that is really bad, so you can see while the colors here might be a little bit subtle on your monitor, but it's the progression of dark colors to light colors to dark colors, so dark red is really bad, dark green is really good and everything in between is a relative view of that number. Now, these styles here the good bad ugly and the bad, less bad, not okay and okay, those are common styles that we use at Darren's Dandy candy and I build them into the template that I used to create the cross tab that is why they were available to me, you can use the creature your own writing the report or you can create your own standard ones and include them in your corporate template too, so lets press okay here and now lets see how this looks. Now, looking better still doesn't look like a heat map the way I want it to look, but at least now I can start to see where the problems are, so let's go back and let's tweak this a little bit better and make it even more fancy. So, I don't want to see the colors here on the edges I want to get rid of them, so I am going to delete the style and I am going to delete the style here, also I don't really care about the quarters I just care about the trend, so I am going to remove the quarters from here, you could leave them there if you like it is entirely up to you, this just happens to be the look that I am trying to achieve you will see when we get there, and I am going to center these cells vertically, then what I am going to do is I am going to save these cross tab cells here, I want them to look like a box, so I am going to set the size of them, many people don't realize you can actually set the size of a cross tab cell, but when you are creating a heat map, it really gives you a nice look, so I am going to have each cell or intersection to be 30 pixels/30 pixels wide and I do not want to display, I do not want to display the discount in there, I only want to display the color, because the color is what is going to tell me good or bad, so lets run that. Now, that is a pretty slick looking heat map, you can see there is a large number of dark green that means those are good, light green are okay, but look over here I have got pink, light red and dark red and again that is our friend Norway, so you can see that Norway is getting into a big problem with discounting, so we give this back to Mr Snickers and he can open this and express, and once again you can see that we have created a fairly complex and advanced report and reports *[Inaudible]* professional and it shows up just *[Inaudible]* express and the line of business manager can interact and work with it, so Mr. Snickers now says I see I have a problem, I guess the problem is the rules in Norway allow them to discount as much as they want that is probably not good, there should be rules that can control probably margin as well as discounting and voluming and that might fix the problem. So, we will look at that in the third demo in a moment.

Here is another example of a heat map, this was taken from a NASDAQ stock exchange they use it I think quite effectively it shows one end the in green the ones that gained during the day and what percentage it was use your stock symbols, and they have shading colors down to the ones that lost, anything with red lost, anything with a lot of red lost a lot, heat maps can be very effective at giving you a quick look of winners and losers or good and bad. Now, for the last demo Mr Snickers says to Smarties "Look I need to

make a case to *[Inaudible]* I need to present to her and show her what is wrong and use this as justification for getting money to change the sales plan of Norway to fix this problem, so I need a report that is both attractive, but also highlights what we've found, can you help me?" Smarties says "Of course," so let's watch what Smarties does to create a nice looking report. So, Smarties is a professional now and he is going to start with a blank report this time, like last time Smarties is going to put the standard corporate head around there, so we will just create a page header I am turning it on, and we drop a layout component reference and we point to our library of useful report pieces and *[Inaudible]* the title area bang there is my title, so Smarties says "I want to have two graphs side by side that highlight the drop in profit in Norway compared to the other countries and the rise in discount in Norway relative to other countries, this will highlight the fact that two are related, so it will be obvious to *[Inaudible]* what is going on" so the easiest way to put two things side by side is of course a table with two cells one row, once again I am going to center this on the page, and I am going to drop in a chart. Now, since I am going to show time at the bottom in terms of quarters it's probably most useful to use a line chart, a line chart indicates continuous, like a continuous axis like date, so I think that works best rather than a bar chart for example *[Inaudible]* chart, so we will put the quarters on here and I am only interested in the last four quarters, so I am going to pull in the children of here today and on a multi select *[Inaudible]* drag them down from my category, and I am going to choose the country level for this series and the measure is going to be gross profit, let's do that one first. Now, let's do the other chart here, I will put another line chart, because I am going to use the same categories time to mention, in fact it is going to be very similar to the other one, except I use a different measure, so I am going to show discount is the measure and I am going to show country as old level. The country is a series pardon me and back up here to the my year to date quarters, okay so let's just do a quick run on that and see how that looks. Okay, so you can see that I have got all the countries and if you look closely and pick out the right color you can see that this is in fact Norway spiking up here and I can't tell which one this is or this one is discount, and this one over here if I struggle I can look in here and pick out this one is Norway and I can see in the edge here is gross profit, so I think I have the right information, but in my view this is a poor visualization you struggle to see the relevant information, you are cluttered by other information that you don't care about, I don't really care what Australia have got, I just care about Norway as much works, so what Smarties is going to do or what I am going to do is I am going to remove this lesson, this is not useful, I am going to highlight the bar for Norway and I will put a title indicating what happened and get rid of these other useless titles, so that will put more space on the chart for the data presentation and it will be more obvious what is going on, so let's try that and see how that works. Okay so legend delete it we don't need it axis title, let's get rid of both of them, because I don't find them very meaningful either. Now, how am I going to highlight the one for Norway, well I am going to use a special palette that I created, corporate palette that we use in the Northern Europe region that has I have added it to the standard list of palettes on the server, and it is going to draw Norway, the line for Norway in red and the rest of them in grey, let's do that over here for this one too, get rid of his legend, get rid of the axis titles, change palette, then I am going to format gross profit, so that it shows up a bit cleaner, I am going to put it as currency and I am going to scale it by millions, so how less zero is there and I am going to add a title and a sub title

to this chart, and this is where I will tell you what I will tell the reader in this case Mrs. Obama was going on, so this is gross profit millions Norway highlighted and this one we will do the similar thing, so this is discount Norway, so lets run that and see how that looks see if it's a bit clear, yeah I think that is better, now you can see that Norway is clearly down the rest of them are okay and Norway is clearly up here, this is a better visualization, it cleanly portrays the information however well I have probably been a little bit too far with millions, I could probably put up to thousands, but that is neither here nor there, however one thing missing from here is some visual attractiveness, some appeal to ensure that Mrs. Obama looks at and gives it the detail, gives it the attention that it deserves, she is a very busy person, she has got a lot of people talking to her lot of things to look at, sometimes when your information is presented in an appealing manner people will give it more attention, so we can add some nice look to it without *[Inaudible]* the usefulness of the chart, so lets go back and do that, so now I am going to add some nice looking background to this chart, so *[Inaudible]* we have this new feature called generated background, and what that allows you to do is to specify vast number of properties to get all kinds of fancy looks, so the first thing we are going to do is we are going to add a border, so the border is going to be around the entire chart in this case all though I can put borders of this nature around many pieces of the chart and I am going to say I want this one to be three points thick and I want it to be a ridge type border and I am going to pick a maroon color lets say, and I can also give it rounded corners instead of just a square I can say I want a five pixel round the corner, I can also control the *[Inaudible]* that goes behind the chart and we can put linear gradients , we can put radial linear gradients, rectangular gradients, solid colors and patterns after building a few of these things I know that I really like this radial line gradient affect, what it is going to do it is just going to give it almost like a spotlight look like there is a light shining on the upper right corner of it and bleeding out you will see when it is done it is going to look I think pretty sharp, so we will start with white and we will go to lets say we go to grey and you can pick any number of colors here you want and you can pick different positions for them I mean you can, what it does for the grading is that it interpolates between each color that you put here, but I have only chosen two, because I think it is going to go good effect I want the white to be two pixels in diameter the radius of it and the other one to be 200, and the position of where I want that radius to be is going to be 25 in the X, 75 in the Y okay, so let's run this and see how this looks cool, so that is the effect you get. Now I have done that backwards, so all that I missed here is that it should be 75 for the X and 25 for the Y, and after we run that we can see how that looks, there that looks sharp you get this nice white light up here in the corner and it sort of shades out and a nice sort of soft glowing effect and I have got a nice ridge like rounded corner boarder around my chart. I could try and adjust the colors of this a little bit more or change darken the colors of the nano wave lines to make them stand out, but this is fine, because those lines aren't important in this case. Now, I really like that style, so I want to play it over here, so rather than recreating that over here I can use this wonderful new feature and *[Inaudible]* called the eye dropper. The eye dropper picks up style, so with this chart selected I click the eye dropper, it sucks up the style of this guy I select the new chart and I apply it from the drop down eye dropper and you run it an alert chart should have exactly the same style there you go looks pretty good, the only thing missing is a little bit of padding between these two guys, so I will just add some padding to those table *[Inaudible]* I just

really all I needed to add it to one, so I just need space between them, so to this guy here I will add five pixels of padding to run that and that looks pretty good, the last thing I am going to do before I give this back to Snickers is I am going to add one of the new charts, I am going to add the Marimekko chart, so I am going to drop in a block, because I want this guy to be run underneath these two and I am going to want him centered, so *[Inaudible]* chart in here and Marimekko is here on to the column group, it looks like that, drop that down, now like select the block and I do center, just to make sure you center and Marimekko chart is interesting it is a 100% stack bar chart, so all the series for one category it goes from 0 to 100% you will see when I run it in a moment, but in addition to that the width of the bar is also proportional to the absolute total value of the bar, so you can get an idea of not only the percent division of the different series, but also the overall value in the relative of each category versus the other ones, it is actually quite helpful, so what I am going to do in this case is I am going to put this on here for Snickers so that it can show Mrs. Bulmow that the returns from the different products are actually not different and it is not returns that could be causing the problem, so I know she is greatly concerned about returns all the time, so we will drop in again my quarters here for the category for the measure I will put returns and for series I am going to put brand...I put brand and I am going to nest underneath brand product, so the products for a particular brand will be grouped together, now I know that this is going to try and show a lot of information, so I am going to make this chart a lot wider, *[Inaudible]* size and let's make it 600 pixels wide and the last thing I am going to do, well two things to do actually, I am going to change this palette, I am going to make this a little bit different, I am going to use this modern palette just to see how it looks, kind of got some nice *[Inaudible]* to it, but of course I am going to suck up the style for my original chart paste it there, so he should have the same generated background and I am going to add a little bit of padding to the top of this block to give him some space and then we should be all set and there you go here is the report fit to bring to Mrs. *[Inaudible]* the Vice president of sales and show that gross profit is going down in Norway, because discounting is going up and the returns have actually pretty consistent here, so you can see that the total here 1726 is the total for this entire bar, it is what the 100% means, so the width of this bar is proportional to this, this bar here is for 2300, so it is a little bit wider than the last one, so that is what the Marimekko gives you, sometimes also call the tapestry chart, so let's go back to the slide show, so fancy presentation you saw that we can add some what you might call Zip to your charts, but there is two kind of opposing views in the industry, one is to say that no you should have very basic blend and simple to the point charts kind of like what I had first one I just had the grey lines with the red line, I call that the *[Inaudible]* camp they say anything else distracts *[Inaudible]* value, the other camp says no...no I need super flashy, I need all these nice little shiny *[Inaudible]* wising bells and flashing lights and everything else on their to track peoples attention *[Inaudible]* marketing side, but the truth is somewhere in between, I really believe you need to have good solid value that is well communicated, but you can also add some attractiveness to this, to pull in your reader and to bring them into to see the stuff you want, you just have to find the right balance for your audience, it really depends who you are presenting or who is consuming the information. The generated background that we showed can be created as a class style in new report and add it to a corporate template, so you could reuse it if you have style that you always like, like that radio linear gradient one I created

and these things can be applied to titles to chart titles, to blocks to tables that can be applied to many places in your report not just charts, some more example of what we can do at presentation graphics, these were build my buddy *[Inaudible]* here is a donut chart with a nice logo in the middle and nice shading gradient on the outside and shaded gradient pieces and here is a nice looking chart with a rounded rectangle edges with a semi transparent image on the background, so you can do quite a bit with a generator background I could probably talk for three hours about all the stuff you could do with it, the best way is to try it our for yourself and see what kind of nice things you could create Marimekko chart once again it displaced two values, one on the stacked access which is the percentage of your series here and the bar width access which shows you total for each category, so in this one this sample here which shows the same data, I have just only showing brands I am not showing brands and products and I am showing all quarters, so that you can see in Q 1 very quickly, because it is a narrow bar there weren't many returns and you can see over here Q1 in 06 was probably one of the quarters that had the most returns, because it is the widest and you can see that this roughly divided evenly amongst the three brands, so that is all I have to show today, I hope you have enjoyed it, it is important to know that I am keenly interested in feedback from you guys, I want to know what you customers and your customers are doing and want to do, send me samples of charts that you cant do or samples of charts that are hard to do, send me things that you would like to do in Cognos, I will use them as charting requirements and I will and where possible I used *[Inaudible]* text cases as we develop new software to ensure that we get it right. Your input really does make a big difference to what we produce in the future, so seriously contact me and I am sure *[Inaudible]* this because you got a delicious stuff, but I want to hear, thank you for much for your attention and I hope you enjoyed it.