MIS case study transcripts.

1. Overview of transcripts.

The following are transcripts from six managers at BT. They are based on real interviews with real managers although the names have been changed and, in some cases, the transcripts contain material from more than one interview. These should be used in conjunction with the case study notes in a separate file.

After Sovereign BT's management structure, at the regional[1] level, consists of level 1 (sometimes called tier 1) managers who are essentially junior/line managers, level 2 managers who are middle managers and level 3 managers who are the most senior managers at a regional level.

The interviews are with:

3.1. Dan Lloyd, Installation Manager (Level 1)

Dan is a relatively new to management. He has worked for BT for 10 years and has been promoted from the field.

3.2. James Moore Repairs Manager (Level 1, previously BC 1)

James has worked as a manager for BT for about a year. He was previously classified as BC1, which was a line manager in the Business Communications. He has now taken on additional responsibilities although he is still classified as a level 1 manager under the new management structure.

3.3. Deborah Johnson, Sales Office Manager, (Level 1 now acting level 2)

Deborah has worked for BT for a total of eighteen years. Currently she has worked as a level 1 manager for fifteen years after a career break of three years when she left to have a family. Deborah is currently an acting level 2 manager.

3.4. Walter Maner, Repairs Manager (Level 2)

Walter is a level 2 manager in repairs. He has worked for BT for six years. Previously he worked in manufacturing industry.

3.5. William Betchel, District Billing Manager, (Level 3)

William has worked for BT for 3 years; previously he worked in the financial services industry.

3.6. Mike Flex, Sales and Customer Relations Manager (Level 3)

Mike has spent all of his working life in BT.

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[1] Regions represent geographical areas such as "The North East" or "The North West" although, as you will see, what exactly is meant by "The North East" changes.

1.1. Dan Lloyd, Installation Manager (Level 1)

Q. So, the first question is can you briefly describe the duties and responsibilities that are associated with your present post.

I. At the moment I am the operational and support manager for the installation control of the North of the District. The district is split into two parts, there's Middlesborough who are the smaller part of the district and then there's the Newcastle office that is the major site. So, I'm the operational support manager for the North end supporting all installation managers and staff within the North of the group. I'm looking at any problems that staff are encountering using the CSS system, ways and means of improving how a manager and staff can operate the system. At the moment it is only a temporary role because of the current climate with BT, we don't know how with the reorganisation of the company it's going to stand but there was found to be a need for support to the managers especially on operating the day to day running of the system.

Q. So, that temporaryness is that all part of this project sovereign?

I. That's right. Initially when the job was set up as operational support it was envisaged that it would grow to an extent to support all of the functions within either installation or repair but now Sovereign's coming along that will obviously curtail the life of the job in its present format.

Q. And how long have you been doing that?

I. About six months.

Q. And what level in the organisation is that in BT's management structure?

I. Management structure it's a Level 1 structure at the moment.

Q. The second question is what uses do you find for the system?

I. My use is quite a lot. I use it very much. To me it is an enabling tool to look at the progress of a customer's order and to look at the problems that are encountered by the various installation engineers or maintenance engineers in the execution of their job. For whatever reason if the job holds or is delayed or encounters a problem then it is my function to look at that, to identify the problem and eradicate it or find a fix for it.

Q. So, how if you could take a kind of hypothetical example how would you follow it through using the system?

I. If we get a problem on a job, for instance we can't complete the job for whatever reason someone would approach me with a problem, I would look at the problem try and identify the area where the problem is occurring and then either try and fix it myself or refer the problem to our user support for fixing from there on in. If they can't fix it then it would go to our national department in London where they could identify the problem and try. Sometimes it requires a software fix to put the problem right, sometimes it's just something local that is sticking which can be identified by using the system via the various transactions we have looking in at the problem and knowing the root to take to sort the problem out.

Q. Right. And the information there is on the system that obviously provides you with all that you need to know?

I.   Yes. I would suggest 99% of the time there is enough information there to direct an individual to find out a problem or to look at a problem.

Q.   And the problems are?

I.   Various. People use a transaction incorrectly and foul up the system, they use the wrong code, they put the wrong date in. Manual input in a lot of cases is a problem.

Q.   A user problem?

I.   User problems are causing a defect within the system. It's difficult to be specific but if there are enough transactions available to dig out from and hopefully correct the problem and resolve it.

Q.   Would you say then spend less time in collecting the information you need in order to do your job as a result of the introduction of this system?

I.   Certainly the workload is still the same because what we've done is reduce time scales and condensed more so you've got to be more, you've got a greater volume and quicker turnaround whereas before we were turning orders round in 7/8/10 days now we're turning them round in 3/4 days so obviously the volume is there which still needs managing. There is I would suggest more proactive management taking place, a little bit more planning involved in it allowing you more time to be more effective by being proactive really. So, I wouldn't say I spend less time, it's hard to quantify the time. I would suggest that fault finding may take up to about 40% of the job that I'm doing in support. I'm also there looking at possible development as well, but fault finding I would suggest is about 40% of my time taken up at the moment.

Q.   Can you give an example of that? It's an interesting idea that you're spending less time fire-fighting, more time being able to think.

I.   You can identify other areas of concern by having this tool to look at in usage whereas before you didn't have it, you didn't have the visibility, you were running around in circles, now you can sit back and you can go more direct to a problem, compute a problem more quickly I would suggest.

Q.   This is a question asking you to think about before the system, what would you say that you can do with the aid of this system that you could not perhaps do before?

I.   What I can do now is have the total visibility of the situation no matter what it is I have the visibility to see exactly what I want to look at. Whereas before with the manual paper system we had if we had a problem in the area that I work in, the installation office, I would only have visibility of the installation office working of the job, now I have the total picture from the concept of the order where the order is taken at order entry to the order being closed. I can view every application now with an integrated system and that to me is a huge weight of any managers' shoulders because the visibility is there.

Q.   So, and in relation to the previous question, I suppose that must mean that you can do your job much more speedily perhaps?

I.   That's right. Previous to the integrated system I would have to get up, if it was out of my specialism or my area of work I would have to physically go to, we used to have a huge library and the library was 50/60 feet long by about 8 feet high, if you wanted historic information you would have to go to another floor within the building and find that information. Now I just sit at my desk and use the terminal and make that work for me.

Q. What sort would you say, what skills and attributes are needed to get the most from the particular system?

I. You obviously need the knowledge of your own specialism and a lot of people have only been trained in a specialist area so although they can view and display other work areas their main knowledge is down to the area they were trained in. Other knowledge that they've gained is just using the system, working their way through and just self-teach. The curiosity side of it creeps in "I wonder if I put this in", "what can I do with this?". A lot of transactions are only display but it gives a user a way round it looking at other specialisms but they haven't been trained just to display the transaction or a page of text.

Q. And do you think that, in your experience, does that enable people to develop more insight into those other areas?

I. I think in certain areas it does. Curiosity is a great enabler for people to do things I believe where they can, if a person is that way inclined they will look and develop themselves. Other areas, other people they've got to be shown a, b, c way to do things. But knowledge, everybody was given enough knowledge on how to use the system on their own specialisms. Other people had more knowledge given to them to do other jobs obviously and the more complicated your job the higher degree of training and information was provided to the user.

Q. Do you think the system gives you more or less, and this is a two part thing firstly, do you think the system gives you more ability to control your work or less?

I. As a manager it gives me total control over the work area that I'm involved with plus other work areas. I can sit at my desk and say to a specialism within a structure of the job, whatever reason you are delaying that job or you haven't indicated the reasons why you have delayed that job or you're not doing your job properly. So, overall it gives me greater control in executing customer's orders without a doubt. It's tremendous I think.

Q. And access, the second part is access to user information I think you've already perhaps covered that in comments.

I. Certain areas of access are restricted, they've got to be. You obviously cannot have the terminal on display where Joe public can see it with certain customer's data to be overlooked. Certain people in the building cannot do certain transactions because it would be incorrect that they could alter certain data about a customer. So there is access control on transactions is very highly controlled in this environment here. It has to go to a certain level of management that must be at least a Level 3. So that is tightly controlled, it needs to be.

Q. How was that decided, was that just something that was set up in the actual implementation stage or does it get reviewed?

I. It gets reviewed. It was initially set up at the implementation stage. The implementation team sat down and thought out all the necessary transactions that a user would need for the application and then what they appointed were Application Liaison Officers to be in charge of that application and any requests for a transaction to be added or deleted must go to Application Liaison Officer and the User Manager before it goes up to what we call the transaction custodians for approval or disapproval. It was very well thought out initially.

Q. How do you feel, and this is a question about how you feel in terms of your position in the company, how do you feel it's changed, if at all, your position in the company?

DAN LLOYD, INSTALLATION, (LEVEL 1)

I.   Well, the job I'm doing presently didn't exist under the old manual system. We had operational managers who were operationally controlling a group of people, they were executing a certain application of a job. Since the introduction of CSS certain areas within the business have had a decrease of staff and obviously management within the structure because of the ease that the work flows through the system but other areas have had an increase in staff and an increase in managers because of CSS. Now the installation office has had an increase in staff because of the extra burden or workload it's applied to people using the system. It was introduced on a level of status quo as it was on the manual system and it was very apparent within a matter of weeks that people couldn't cope because of the extra complexities of dealing with an order. So, that resulted in an increase in staff. It was then identified that the application I'm from that there was a need to inject an operational support team that gave me, took me from my operational job to a support job and it also gave an increase in promotion because it meant that I moved up one level, one scale within the level of management. So as far as I'm concerned it's created an opening for another job, it's created an additional scale of post that is obviously a forward step for myself, so as I say yes it was in certain areas created more jobs, more promotion aspects at this present time.

Q.   You mentioned that it had resulted in a growth in employment, in some areas it has led to a reduction, what areas in your view has it led to a reduction in?

I.   The reductions have been in order entry where we take the order from the customer. Without a doubt their job is much simpler, much faster. Even though they had a stand-alone computer system prior to CSS it was more labour intensive than what it is now. I don't think it's affected the billing areas much. The directories, there was definitely an increase in that area there. Operator services now have the system in use so they're not doing so much manually but it would be wrong to say it's had any reduction in operator services because of the system because their application isn't that big on CSS.

Q.   And yet Project Sovereign, as I understand it, is resulting in a reduction in staff is that right? To what extent is that affected by the use of systems such as CSS, or is that just one element of a number of factors?

I.   Sovereign, this is only my own personal view is that the new structure for the company, the new way forward of trying to reduce staffing levels, they've started with the management levels' first. We don't know what's going to happened with workforce, at the moment they've started with the managers and they've thinned out I would suggest areas of management that were possibly being carried, surplus to requirements. What it will mean now is that managers will have an increased workload at the moment. You can definitely see there's going to be increased workloads. The benefits to the company I don't know what they'd be at the moment. The benefits to the customer are there's obviously going to be hopefully one point of contact and that one point of contact will be handled wherever it comes in. As for the job losses CSS had to contribute to it. I'm not saying it's the major reason but it must have had some contribution to the decision to be made to start the reduced levels because of the visibility that you have with the system. Again this is my view only, but there was a need to restructure the company in any case, we couldn't have continued I don't think on the lines that we were going.

Q.   Can I ask you about if you could list for me, again obviously on the basis of your experience, what you would see as both the good and the bad points, the strengths and the weaknesses of the system CSS in collecting information.

I.   The strengths to me have to be total visibility of an order, I can't get away from that. That to me is its number one of the system. It enables managers to manage more effectively, they have a visibility as I said to do their job more efficiently, and they're not up and down chasing round bits of paper. So they've got to be the two pluses. Disadvantages? They are disadvantages with the system which to my view, to my eyes are minor. It's resource hungry in certain areas so that has

to be a negative towards it. It certainly needs managing more than we did before but whether that's a disadvantage or not I don't know.

Q. Could you just explain that a bit more?

I. You have to follow the progression of the order through thoroughly, you have to make sure there are people in places to ensure that the order does close, we get the bill in, the revenue keeps coming from the customers in order for us to survive. So that does need a little bit more managing. It's become more resource hungry in that area so I suppose you shift from one area to another your resource to follow the system through. I'm trying to put it in context more, I'm trying to work it through.

Q. Do you mean that part of the system requires a greater degree of efficiency on the part of managers?

I. I would suggest it does. You just cannot afford to sit back and say well the machine's doing that because it doesn't. At times the machine or the system fails either due to human error or machine error. I've said before machine error is very few it's normally the human element, the input element that fails it and it's wrong to assume that you've got an order that has been electronically entered and it's pushing through the system, you've got to manage it because jobs do stick, orders stick, we get to the situation where people become complacent and they think oh the machine's done that and the order goes through. So it needs managing, someone needs to stand out looking in to see that it is functioning correctly.

Q. How do you feel, overall then, that it's changed the way you work, the way you do your job up to now?

I. Overall it allows me to sit at a desk and manage the work area that I operate in efficiently, effectively without moving round the building or departments to check on the information. I would hope that we have improved our customer satisfaction by introducing the system, giving the customer what they want when they want it because there's the visibility of the progression of the order. I would hope that that's what's come out of it. Allowed me to effectively manage the area I'm in.

Q. This is looking more to the future now. How would you see your role changing in the future as a result of the development of systems like this?

I. Difficult question. Going back to just before we introduced this, 1985/86, we all had views of what was going to happen because this idea coming forward very quickly and it looked good and then we introduced it in certain areas it was a total failure and everybody thought this system is going to die. I would reckon that it's the greatest move we've made and it's allowed us to do our job more effectively. It's changed completely the structure of the manager now compared to the manual system they had before this one. His role is greatly, not reduced, it's greatly improved on his effectiveness whereas before he was effective he was effective because he had to run around so much and gather the data. Now he sits and still gathers the data but he just sits there quietly working away himself without bothering other people, without interfering with other people's time and gathers the data that allows him then to identify an area of concern quickly which he can then manage on his own without too much interference. How long it's going to last I don't know because your technology we have at the moment is only as good as what you have in place now, within two years it's obviously going to change. I would see the way we're going to operate in the future that we're going to have a lot more systems in place remotely used technology. We're not going to have masses of bodies working from engineering centres and what have you.

Q. The following questions are really about how the system influences your working relations with others inside and outside the organisation. The first one is you've just been mentioning the ways in which it gives you more control over people working in the field below you in the organisation structure but how do you think that those above you use the system? We've talked about below but what about those in higher levels of the management structure?

I. I certainly know within the group I operate now my immediate boss uses it a lot and fully understands it, you can't take that away from him. He totally understands the system. Above that?

Q. And what level is he?

I. That's level II. Totally understands the system very good, can talk fluently with it, no problem at all. Above that I would suggest there is a massive grey area within the management structure on how the system's used. I would suggest that not many of them log onto the system at all. I think maybe the management level needs to understand the use of this tool that they have at their fingertips. I would suggest if you've got the responsibilities of a group, and it doesn't matter what level you're at, you must view, or have the ability to display, certain areas and know how you're performing and know what's going on with the system - especially when there's been so much time and cost invested in this system, it is our future - they should be able to go in and say "I want to know how this particular area's operating today" or "what's happening with this particular customer's order?"

Q. Why do you think that is then, why isn't widely used as perhaps it might be?

I. Possibly ignorance of the system and how it operates. It may be that there's the assumption made that "I have managers under me who I pay to operate the system", that may come into it. It may be that the fact that just the general information or knowledge of the system wasn't given to that level although it was available at the time. If they have so much difficulty they could have done it.

Q. Some middle managers shall we say, and below, worry about (pause) You've used the idea, you've talked quite a lot about visibility and you've mentioned yourself how the activity of people below you can be more visible as a result of this system and you can check on it well the concern of some middle managers might be, well, that those above them can do that to them as well. Do you think that's a justifiable fear?

I. I would suggest it is. Knowing from my immediate boss, my level 2, if there's a query or a complaint or there's something wrong or a statistic is wrong, I know for a fact that if he's got a query then he's looked at it and researched it before he comes and says "what about this, what's gone wrong here?" So there's always that element of fear that I suppose big brother's looking down on you. It doesn't bother me in the slightest. Any level can look down and say well there's a problem there and as long as I can justify that problem then I've got no fears, even if that threat is there to some people, that big brother is looking down on you.

Q. Right. To what extent would you say that the CSS system has made your work more dependent on other departments work?

I. I don't think it's more dependent because it was there on the manual system. We still had the same process, we were still dependent on the customer ringing in and the ordering people writing the order down on paper and then duplicating that paper to the various departments and sending it to the installation office, it was then disseminated out to a lot of people to do their work. All we've done is really transpose that electronically to do exactly the same thing. We still have the

order entry putting the order in but then the system drags it to each different application to do their work.

Q. So, it hasn't you would say?

I. I would suggest no. Not at the moment.

Q. To what extent has the system improved communications though would you say, both within the company and perhaps even with those outside it?

I. As far as within the company communications have improved very quickly because you can see a problem without, you can identify a problem without moving, without picking a telephone up, just by using the system. That's 50% of your work if you've got a customer complaint or a problem of any description. You can use the system, look at your area that you want to and identify the problem and you're as I said 50% of the way to coming up with an answer. Then you can use the telephone effectively or the system effectively to communicate with another department to say you need to do this or this has gone wrong or whatever. So communication wise it has improved I would suggest a lot. It saves people running around and using a telephone. If a customer rings up I can identify a customer by several areas, by telephone number, by account, by name, by address. Whereas before I would have to write the name and address down, the telephone number down, physically go and thumb through records, through record cards or whatever and spend quite some time looking through customers' data. So now if you came on the telephone to me now, I would say to you "okay can I have your telephone number please", I would take the telephone number, tap it in within nine or ten digits on the keyboard and I would be saying to you in two or three seconds "now Mr McLoughlin", I could go right through your information and discuss what you've got, take an order from you, or whatever.

Q. Do you think that the system has resulted then in the formation of inter-departmental teams to solve problems? Here you've got a system that obviously, as you say, makes the work of other functions more visible, has that in any way changed the way the company organises people into groups?

I. I would have liked to have said yes it has but a lot of departments have just put their head in the sand and buried themselves and to them it's an irritant, it's not a useful tool to use, they've just buried their heads. Certain departments in here don't want to know it. They're quite happy with their little stand-alone system, although they have it they have access to the system, they like their little stand-alone system because it's specific to the application. It's no good as a business. You need as a business to have integration in my opinion and it's got to be used to the full extent. So little teams. Initially there was a team set up, it was introduced to sort out the problems and there was specialists from each application sat together and they looked over the whole project and within six months it was disbanded and most people had gone their own little way but because the application I come from is the responsibility of giving the customer service when they want it we have had to take the lead role and what you find is that we are now a leading influence on the whole way certain other applications perform their job. We drive it, we drive a lot of the statistics as well purely and simply because we are in the end.

Q. You're the closest to the customer?

I. Yes. What we're here for is putting telephones in and at the end of the day we've got to get that phone in when they want it no matter what means you use to get it in, CSS is just a tool that you can use to see what's holding the job up or how the job's progressing. I would like to say to you yes we've got a team that regularly sits together and talks but that doesn't happen.

Q. Can I ask you a little bit more about that, it might be a question that you feel may be difficult, but are there any obvious places where that's a difficulty in the organisation?

I. There's one major difficulty in this organisation that is our local lines' division. They are the division who are responsible for the underground cables from the exchange to the customer's premise, they have their own stand-alone system and they're quite happy with it. It gives them what they want, statistics that they want, programme times, programme of work, how you can plan a job, your Gantt charts what have you. They're happy with that but it's not visible to anybody else you see. So if we've got a query we have to look at our own system, CSS, and then if they haven't added the necessary notes then you have to either go and see them or pick the telephone up and say to them "all right you've got a date or you've got a job number against this particular activity which is yours, what's the progress it's overrun its time, it's not completed". Then they have to use their system to come back and feed in. Now to me that's lunacy in its finest. We're struggling to get them on board.

Q. And yet they are, they can access the CSS system?

I. They have to access the system, yes. They are giving the work activity that they have to work with but they take their activity and park it in whatever status they park it at and then work on their own stand-alone system. I've spent 12 month now, I've spent a lot of hours on trying to get them to adopt the way forward. I've been to another district to see a system that works and tried to get them involved with it and still I am unsuccessful in getting that introduced.

Q. And what would you put that down to yourself?

I. Ignorance I would suggest. To be blunt they don't want to know, they're happy with what they've got you see. There is a need for further education in that area to bring them on-line with everybody else to give us what we want and what we want is the visibility throughout. They don't want to be visible they're happy in their own little environment, working away doing their own sweet thing.

Q. Are you involved also in terms of the system that you use, are you part of the ability to organise meetings, diary scheduling functions?

I. Yes.

Q. Do you use that yourself?

I. Yes. We've got a, not through the CSS menu but through an add-on or a bolt-on system we've got what we call electronic diary, electronic management system that you can diary events. I have my own electric diary I can schedule in meetings, I can send messages on the system, hold messages and store them and what have you. I find that quite an asset. I find the diary a chore because I have to keep a desk diary, I have to keep a pocket diary and I have an electronic diary and I find that a little bit frustrating that you've got to make three entries because you can be out somewhere and not have access to an electronic diary. So you've got to keep a pocket diary and I've got to keep a desk diary because if I go off and there's any relief for my duty they don't have access to my diary, my electronic diary although I can make it visible it's a little bit inconvenient to do that at times.

Q. So the next stage presumably will be electronic pocket diaries.

I. It has to be.

Q. What do you think then overall was the justification for the development of the CSS system? Perhaps this needs to be looked at in terms of both operational considerations and strategic considerations in the business as a whole.

I. No matter what we did really there had to be an improvement in the way we handled customers, so that had to be the major development factor "how can we improve the handling of our customers and improve the service to them and the speed that we respond?" The manual system had been in existence for years and really hadn't been improved other than after the data entry stage. They introduced a system that would allow you to electronically input customer's data but that data was then still printed off onto copies and was handled manually within the business, so the only improvement you had was at the point of contact with the customer when somebody sat at the keyboard. To look to the future we will have a single point of contact where hopefully we would be able to take an order, answer a billing query or take a fault all at one entry point and that to me has to be the icing on the cake. We've got the system in, we've got most of the functions on board operating the system, now we need a single point of contact where the customer can be satisfied with just one phone call. There is nothing worse in my opinion as being shunted around, its just soul destroying being moved around.

Q. Well that's it. I don't know whether there's any observations you want to ask or make on the questions, we would welcome any observations you would like to make.

1.2.   James Moore Repairs Manager (Level 1, previously BC 1)

Q. Could you perhaps provide a very brief, provide me with your job title, your level in the company and a very brief summary of your main duties and responsibilities.

I. Right. My job level is classed as a first line manager so directly beneath me are the actual, what used to be classed as staff, but are now called people. So I'm in direct contact with the people who do the work. The job title is Major Customer Control Manager for Newcastle. The type of work I deal with is the orders that come in from customers are processed by our sales department or by our fault reception people and they're translated electronically which are directed to my group and my group distributes whatever type of work to the people in the field who do the work. So I've got nobody who works outside, my staff are all inside and they send the work on to the field staff to do the physical work.

Q. To carry out the engineering work?

I. Yes.

Q. So, how many staff are you responsible for?

I. 11.

Q. And who are you responsible to?

I. I'm responsible to a chap called John Snapper who is in Leeds, so he's my immediate boss. He's classed as level 2.

Q. Fine. Can I ask you then how you use the CSS system in your job?

I. The customer either reports the fault or asks for an installation, the reception people take that, transfer that electronically, on-line, onto the system and then as soon as they've finished that transaction, in the case of a fault it's directed directly to me, if it involves me, and with installation it's spread across every group that needs to be involved.

Q. That would be in addition to yourself?

I. On an installation, in addition to myself, there would be, for exchange work other people would be involved, the repair people are involved to be told that there's a new installation gone in and we need a contract for this, this now needs to be repaired when it goes faulty. It depends on how complicated the installation is. If it involves a new telephone system as opposed to a single telephone it involves other groups such as there could be people asked to put in new ducts, new cable to serve this new customer depending on if they are. So depending on the type of order depends on how many people would get what's classed as an activity to do.

Q. Do you make direct use of the system then yourself? Do you have a terminal?

I. No, CSS produces statistical information and that's the information that I use. I don't use it to process orders, the people who work for me do that.

Q. But you receive the information that they produce?

I. That's right.

Q. So, can I ask what sort of information that is and how you use it?

I. The information that I look at is facts, an order is placed, the customer's asked for a particular date for this work to be done and I would look at whether or not we had met that commitment. So that's the customers' perception of what we do. We have our own internal measures to say that we will do this particular type of order within a certain time scale as well.

Q. So, is it not possible for you to access the system to get that information direct? Are you saying that information still comes to you in a paper form?

I. No that's direct.

Q. That's come to you electronically?

I. Yes. For repairs I have access daily to what's happened the previous day so I can see how many faults we've cleared when we said we would clear them with the customer, how many faults have taken 5 hours, 10 hours, 2 days to clear and I can get that on a daily basis. On installation that's compared weekly by the system so on a weekly basis the system looks at what jobs have been completed in that week and then it brings them out to say whether the customer got that order when they wanted it, we did it within certain time scales and it just gives me the amount of orders we've completed and the percentage of successes.

Q. And that is an electronic form?

I. Yes. It is.

Q. Are there any other ways in which you use the system directly?

I. No, not CSS. We've got other electronic systems. We have a messaging system, a diary system called Props that all managers have access to. We have a diary, we can have a look at other manager's diaries to see if they're available. We can send messages to each other. So electronic memos rather than sending bits of paper we can electronically send messages that we do and also receive them.

Q. And you use that fairly extensively?

I. Yes. Well, that's particularly useful for me because my boss is in Leeds and he covers the North East portion there so he has three centres, Newcastle, Leeds and Sheffield. So my colleagues, my equivalent in Leeds and Sheffield, I need to speak to quite regularly on certain issues, change in policy and things like that. So we tend to just pass memos electronically between each other using that method, it's very quick and things don't get lost.

Q. In what ways would you say then these kinds of systems that you've described, in what ways would you say that they have changed the job that you do?

I. Well fortunately I've never known anything but these systems. I've only recently been in management, just over a year, so these systems have always existed for me as a management tool. So I don't know, they obviously did it paper record wise and it was a lot slower. We still do have paper information but as we go on that paper information is put on electronically just because it's so much faster to access and everybody has the information at the touch of a button.

Q. Yes. Well fair enough. Obviously you can't do a before and after comparison that some people can.

I.   Well, as I say we do get particular reports from our computer centre that are sent to us but maybe takes a day to post them, something like that, and that is the type of information we are putting onto screens. So as soon as the information is available on the machine I can get it rather than a hard copy printed off and then sent off to me a day later. So I have seen a change there and it's certainly changed for the better.

Q.   What sort of advantage does that give you, you say it's a change for the better?

I.   Speed. The customer can come over and ask why a particular order hasn't gone through, what's happened to it and it's just there. The information is there. Rather than saying 'well I've got to wait for that to come through' it's just there, the access to information, how quickly you can get to it. There's a lot of information there and it's easier to access a filing system electronically than it is to access a filing system in a filing cabinet. So it comes down to speed. The information is there in the filing cabinet, it's the speed of getting there and getting that information out. Electronically you can go to it straight away.

Q.   Do you think that managers need to develop new kinds of skills to deal with these sorts of systems? Do you have any thoughts on that?

I.   Certainly just not being afraid of the new technology, just the fact that it's on the screen. There maybe people who don't believe what they see they like to see it in black and white rather than on the screen. I find that difficult to comment on because I've always known that and I've had no problem. From a personal point of view I prefer dealing with the machine rather than lots and lots of pieces of paper.

Q.   You're responsible for the work of, I think you said, 11 people. Do you use it to monitor their work?

I.   That's right. CSS is a real time system and I can monitor the work that's being processed at any one time. I can see jobs that have been delayed for whatever reason and I can interrogate any particular job. So the people that are working for me I can see if they're doing their job properly, if they have delayed a particular job whether or not they've contacted the customer and what they've told the customer the delay is. So I can see the work they're doing electronically rather than go and sit beside them, I can sit away from them and monitor them that way. So there's particular checks which I've got to do on all the people on a monthly basis and there's a lot of that checking up I can do away from them and just looking at stuff they've done historically and also the things they're working on now.

Q.   Do you see any advantage to that, of being able to do it in that more distant way?

I.   Well, the fact that they're not, the people that work under you aren't under pressure because the boss is sitting beside them and they feel as though they've got to perform in a particular manner, it tends to be a lot more truthful as well. If you're asking somebody a question they can find ways of showing you things that they want you to see rather than the things that you would like to see. Also it's a lot quicker, you can get round the whole of the staff very quickly. Having said that I do sit with them as well rather than being completely remote, I do sit with them. I feel as though you could possibly do the whole job electronically but at the end of the day you've got to have personal interface with them, they're your people and you've got to be seen to be there with them. So there are possibly more things I could do electronically but I feel as though I need to sit with them.

Q.   One view of the benefits of these systems, I don't know what you think about it in terms of your own experience, is that because you're not having to tear around as much you've got better control over your time. It gives you time you can claw back time to use in other ways.

I.   Oh you're right. As I said some of the hard printouts we used to get! (Raises hands in exasperation.) There was an awful lot of time where you were contacting people to find out where they were, when they were putting them in the post, simple things like that and it does it all takes time. So again it comes down just to speed of access to things, to information, it's just so much quicker.

Q.   You say you save time, how would you spend that?

I.   I mean that's a question I ask myself just in the job in general. I'm sure the majority of the job I do isn't what you would class as managerial. There's probably a lot of it you could get other people to do. One of the things is the fact that I'm there and my people are available to speak to me at any time. I find a lot of my time just spent problem solving during the day - not the true management style - I should have my time management and I should have my green card to say 'yes I'm available' and my red card to say 'no I'm not available' but I don't work that way.

Q.   Do you find you spend more time planning ahead in your work then?

I.   The fact that the information is just so readily available means (pauses) the fire fighting aspect - before it could take you a couple of days to realise that you had a problem where now you've got a problem straightaway, so you can attend to it and the people involved have it fresh in their mind. They know what's happened rather than again waiting a few days for information to filter through.

Q.   Can I ask you directly. Do you think these systems actually help managers to make better quality decisions?

I.   Yes.

Q.   Can you expand on that?

I.   Again it's the fact that it's happened now, is it's real time, it's happened now, and you resolve it now, and that's an advantage. I think we're more proactive now, it's just down to the speed of the thing. That's so important rather than waiting days or weeks for an answer you've got it instantaneously.

Q.   Are there any drawbacks, weaknesses, tensions in your experience associated with the systems that you use?

I.   Well certainly if the system goes down. The system to my knowledge, it's been running for about 4 years now, has only been down for 1 or 2 times and then it's only been for a couple of hours. When it is down it's down and everybody just sits there twiddling their thumbs because you've got no paper copy to work with. There's not a lot you can do when it goes wrong. I mean it is very well backed up the system, we've got procedures if it goes down, all the information's send down to Sheffield or Leeds and it's held on that database until we get running again. I can see in the near future we'll have access to Leeds and Sheffield's database, we'll have direct access to it straightaway.

Q.   Are there any other problems at all? I mean for example what's the position in relation to getting updates done and revisions?

I.   Well, we're having, there's a major revision going to go on within the next couple of months to CSS and I think they've realised that's a mistake. The last revision was done a year ago and they have realised that the fact that they've waited so long for revision that it's going to be quite a bit

change to a lot of things, it's going to involve a lot of people. They've now decided this will be the last major revision they'll do, the rest will be all monthly revisions with very little change affecting very few people. So as I said there's a bit revision going on in CSS in the near future.

Q. What, in general terms, is the level of involvement of the user in planning these changes?

I. Well, because of the size of the company, BT, they do tend to take a representative from a particular part of the company and that representative represents you and depending on where the representative is depends on how much input you have to what's going to change and it just tends to be the local people, the closest people to that representative represents has the biggest say. So yes they do make changes but as I say you feel as though well have they consulted the user before they made that change.

Q. It depends very much on the quality of the rep as well does it?

I. It does. Well again a lot of the changes are policy changes as well, the higher management have made the decision to do a particular type of thing and they'll go ahead and do it and really there's no input lower down. As I said it's a high policy decision and they're going to go with it.

Q. I've just got one or two questions really on the wider organisation and the use of systems like CSS, it may well be that we've covered bits of this in what you've already said but I think there might be other bits that we haven't. In what ways would you say using a system like CSS effects working relations with (a) others within your department, and (b) those in other departments within the organisation?

I. Well management-wise CSS was primarily designed for the customer. The management side is just it's been a case of what can we get out of it. It hasn't been designed with the management in mind. Initially it was seen as the best way for the customer and then, on top of that, they're adding the management tools. So it is a stand-alone system in Newcastle. They are going to network them together so we will all work as one but at present it's just stand-alone.

Q. That presumably reflects the changing requirements of the reorganisation?

I. That's right yes.

Q. Because it's out of step with reorganisation?

I. That's right. We used to have a small Newcastle district that had its own CSS machine and now it's the North East district that is Leeds and Sheffield included and as yet they haven't got the machines combined.

Q. I see. One of the things you said earlier was that it links you in to other parts of the business. So, does the system give you visibility of what's happening in other areas that are relevant to that installation? For example engineering and so on.

I. On an installation you can be working with lots of agencies and the system does give you access to have a look at what a particular agencies doing at any one time.

Q. So you can chase it electronically. I mean we have been in a company where that's looked upon fairly positively. Equally we have been into companies where people say, hang on I don't like the idea of X being able to look into my function - perhaps it doesn't apply to you.

I. Oh it does. I mean we have the control of the installation where the customer facing side, we're the last one on the premises, we're the one who we install equipment. So yes all the other

agencies work for us. So it is important to know that that cable is going to be installed in on time, the men in the exchanges are going to do their bit of work on time. I mean we have the facilities to change their dates and reschedule their work. So, we can see if they've carried out that work as well so it gives us an excellent overall view of what's happening.

Q. We're not so much focusing on the people who deal at the administrative level but the way in which those who manage them handle the information that the system generates. In your case it is to monitor, how the whole thing's working and how effectively. I think that's highly relevant but how do you think, looking at management, how do you think those in the organisation above you use the system?

I. I don't think they do. All too often you can walk in a room and it's not switched on. Then when you ask them, you know, if they want to switch it on, they say couldn't log into it, or it had gone to sleep, or something. They just rely on the tier 1 management to feed that information back to them paper wise.

Q. So, you will take information from the system electronically but you would turn that into a paper report would you?

I. Yes.

Q. Ah, so they wouldn't use their own terminal to access the information?

I. It's certainly like they like to see it. I think one of the difficulties is that the machines aren't linked together. My boss looks after Newcastle, Leeds and Sheffield, the machines aren't linked together. If he wants that information I mean he's really only got one way to do it and that's to compile it on paper.

Q. At the moment.

I. At the moment. But then again I think even if the machines were linked he would still get one person to pull off that information and give it to him on paper. I mean it is not always easy to, you've got a lot of information there, and sometimes what you want are just snippets of information, and really it's very difficult to pull out that bit of information out electronically, put it somewhere, go further on and put it somewhere again. It's easier to do that on paper. I'm talking about CSS here, I mean we have PCs, we have software that I mean it's designed to do that sort of thing, but on CSS that's more difficult. Anyway, certainly for my boss, he prefers it on paper.

Q. So, you filter bottom line information?

I. Yes.

Q. How would you do that then?

I. What my boss has is he has a manager in Leeds who has access to all three machines, CSS machines, and he goes into the Newcastle machine, the Leeds machine, the Sheffield machine and pulls out that particular information that my boss wants and compiles it on a spreadsheet and gives it to him that way.

Q. Pardon?

I.   We have a manager in Leeds who has access to all three machines and he can take any statistical information off any machine. So what he does is he compiles that onto a spreadsheet for my boss.

Q.   Does that worry you?

I.   I don't feel threatened by it but, I think I should be. This chap in Leeds, who compiles all this information, now the people at the front end the people dealing with the faults, the installations in the control put all the information on the screen to why a particular job has failed, what problem we've had an a particular job now. If you've got access to the machine then anybody can read that and this chap in Leeds has access to Newcastle and Sheffield as well as Leeds so he just goes through all the jobs that have been processed in this Newcastle control and he can pull out what jobs have failed and why and he compiles all that information. Now I do more or less exactly the same as that. So there's going to come a time where it's a case of well there's no need for me to do that it's already done for me which I think can be said now.

Q.   Really

I.   Yes. I do it myself now and feed the information down to him but he has access to my machine and he can get exactly that information from my machine.

Q.   Is he a higher level of management than you then?

I.   No, same level.

I.   So, that's really a job he could take from me but then you can't always put on the screen electronically what's happening to a particular installation or fault, it could be quite complicated and it would take more than just a few notes to explain away but again there's no need for him to contact me because he can always contact the person who's dealt with it. This chap from Leeds has the same access as me to my queues of work. So there's nothing stopping him from making those same decisions. So yes, I can see in the near future the whole idea of this, the control of work, the job I do being centralised probably down in Leeds.

Q.   So, that would …?

I.   That would take out my job.

Q.   And perhaps others in same areas as well?

I.   Yes exactly the same yes. That's right. I can't say that my job will exist in two or three years time.

Q.   How do you feel about that?

I.   I mean I find it difficult with my boss being in Leeds the fact that it's maybe two or three times a month I see him. Because I'm geographically remote from Leeds it makes it even more difficult. I mean you don't want to be very remote from the staff, the people who do the work. Well you have got to have the physical supervision of the staff as well, you can't do that electronically. But then if you've got say why can't you have the people who are asking for work to be done in Newcastle and the customer's in Newcastle why can't they go to Leeds, they just make a phone call that's diverted to Leeds and they can deal with that, you have people based in Leeds to deal with that at the customers end. Again, I can see that happening as well.

Q.   So you wouldn't even need 11 people in your office, it would be people in the Leeds office.

I. That's right.

Q. It seems a bit sort of (pause) I've read the project Sovereign material as you have I'm sure, it seems, well it seems based on this notion of getting closer to the customer. I suppose people might say it's a funny notion of getting closer to the customer.

I. I don't think getting closer to the customer is probably the wording it's the customer comes first. So yes, again it's the same as the centralisation of governments it's you're going away from the local community, you haven't got that local point of contact. I mean before Sovereign we had a general manager and no matter what happened in Newcastle, if the customer had a problem they would go straight to the top and then somebody local, somebody who could deal with his problem right off, where now the highest level of management we've got here on business is a tier 2 who deals with the field people and we've got another 4 layers of management above him. Because his boss is my boss who is in Leeds again. So his tier 3 is my tier 3 who's in Leeds. So again geographically he's remote.

Q. Do you go to Leeds to meet up on a face to face basis?

I. Yes. We have all the people under my boss we all meet together on a monthly basis to have a meeting to discuss, set agendas and then we have meetings about particular issues that we need to resolve which can't be resolved over the phone. It's getting together to discuss them. Also my boss visits me on accountability meetings, on targets he set me to meet to check up I'm doing it, so it's maybe three times a month.

Q. What's the climate among managers in your view at the moment towards all of this change, towards the sort of well to some degree the threat, the uncertainty?

I. I think change has the same effect in a lot of people that people are always against change whether it's for the better or worse because they don't like change, they're quite happy doing what they're doing, they can't see why they should change it. I'm quite new to the management set up.

Q. What were you doing before then?

I. I was doing the control bit of the job and now I've stepped up into the management of it. So yes again I'm very new to it and I wouldn't like to say young views but, I don't know whether it's because of the climate I've grown up in whether we just accept change, if it is going to happen then it will happen.

Q. You take your chances.

I. We will do it. As I say, yes, I don't think my job is going to be there for much longer but again I don't feel threatened by that. Now I don't know whether that's a particular new type of attitude or whether it's my type of attitude but certainly the younger managers tend to have the same attitude as me, "well this is changing" and just accepting it. I think there is this thing about change. People don't want to change, things are going quite smoothly so why change it?

1.3. Deborah Johnson, Sales Office Manager, (Level 1 now acting level 2)

Q: The first question is can you briefly describe your present post and the duties and responsibilities that are associated with it?

I: At the moment, I'm doing someone else's job, I am Sales Office Manager, and there are some four other managers working to me who in turn have fifty staff working to them.

Q: You're Level what?

I: Level 2 at the moment, I'm normally a Level 1.

Q: And how long have you been with British Telecom?

I: Fifteen years this time round. I was here when I first left school for three years after which I left to have a family and I came back in 1978.

Q: Are you dealing directly with the public?

I: We are the interface with the customer. We process the orders. The engineers receive the notes that we input into the system and they go out and do the work.

Q: And what do you do when a customer rings up; you ask for their details, get hold of a customer record?

I: We ask for their telephone number. We can access the information by telephone number, address or name but it's easier to ask the customer their telephone number. We can call up on the screen an existing address, confirm their installation and then input any changes that are required to their installation.

Q: And what queries are you dealing with?

I: Anything to do with telephone installation or changes.

Q: Do you think that you spend less time now collecting information as a result of the system.

I: Yes, the information's all in one database, you can access so many different things. Previously, we kept paper records but you had no information about what their current background was, whether they had paid their account, whether they had an account outstanding, anything like that. Now, with the system we've got we can access all this information and information can be input from various different departments and any one department can view it at any one time. You can check back for a complaint received through our Customer Relations Department, it can be input that they received a letter from the customer, the gist of what the complaint is - you could view that as well, so the information's a lot more easily spread.

Q: So, these are things you couldn't do before? Have you any other examples of things you couldn't do before?

I: When we were trying to provide service, it's not always down to - a service may not always be available to a customer. We now have a facility whereby we can check from the Distribution Point that there are spare lines available in the network. So we can immediately confirm to ourselves that there is a spare line available, that the customer will

get service. We will be able to quote the appointment date because the Engineers programme in so many allocations per day, so we can confirm the appointment with the customer. Previously, it could take up to a day (sometimes not as long as that) for the work to get past you to the Engineering Department. From the time we now hit the Enter button on the system, the Engineer can view that order and begin working on it or programming it, depending on what his function's going to be. So, from speed of input, it's a lot quicker, a lot smoother, and the information's more readily available to other people. So it's definitely an easier system to operate.

Q: So, not only does it work faster, it also allows you to provide a better service because you can do things that you couldn't do before?

I: Yes.

Q: What does it take to make the most of these kind of systems? What kind of skills and attributes do you think it takes to make the most of CSS?

I: Initially, none, because we did a lot of good, solid training. Keyboard skills, yes, having a bit of knowledge of a keyboard, a typewriter, because initially everybody's very slow with the one-finger approach. Not being frightened; a lot of people felt, "I'd better not push that button because I don't know what will happen" - the fear of the unknown. We did get quite a good training programme for three weeks, so at least you'd got the opportunity to have a go at everything and know that, if you do push the wrong button, it wasn't the end of the world, you know, the whole system wouldn't fall into a heap. That's because it's such a major change, people just don't accept it straight away. But, as with any new procedure, once you've got into it and understand it you can't really imagine what you did without it.

Q: Was that a problem, then, at the beginning, that people wouldn't accept it?

I: It wasn't so much being accepted, just nervousness, "Am I doing it right?", "What problems will I cause if I do it wrong?", and I think that's human nature, it's not any one individual problem. At all companies, I think if they were honest enough to admit it, you'd see that that would be all the staff's feelings, they'd be frightened that if they pushed a button and something went wrong the whole system fell over. The other criticism I've heard from my people are mostly from those who are a bit dyed in the wool. They are that they've had to become a typist. This idea that I'm not paid to be a typist which seems to be quite prevalent. They don't see it as entering it on a keyboard is just another skill, just different. Some of them don't see it as writing as such, you know they prefer this physical thing, a card which they can write out and update. They don't see the system as being the same kind of thing.

Q: One of the things that other people have said about CSS is that it either gives them too much information or it doesn't give them information in the way that they want it, or they don't like the way that the screen is. I guess that that's all right with you?

I: Only because we are the main inputters of the information onto the system and we find it suits us. A lot of the other people who are using it only access it for information as opposed to inputting and possibly the information's not displayed the way they're used to seeing it displayed. Everything that they could possibly want to know is there. It's just set out differently.

Q: Do you think that the CSS system gives you more control over the work, over what you do?

I: Control over our work is dependent on us, not the system. It makes everything that goes to the engineers more uniform, such as the wording, the way everything is set out is standard from one district to another, whereas before, everybody had their own interpretations. So from the recipient's point of view it's probably better, but it doesn't really control us. It's a tool that we use.

Q: Do you feel that CSS has changed your position in the company at all? For example, do you feel you've got more or less job security or better promotion prospects?

I: It hasn't made any difference at all. Initially, we had to have more staff to cope with the change to the system, but from the other point of view, it hasn't made any difference at all.

Q: Do you think we could just quickly go through the good and bad points of it now?

I: Good points, it's got all the information that we need. Bad points are sometimes just the method that you've to go through, the process you need to go through to access some of the information, it's not always straightforward - from a security point of view, logging on with passwords and user ID's. So it can be a bit of a drawback but it's not a problem. Really, everything's a plus for it. Everything's there; you don't even have to leave your seat in most cases.

Q: And do you think that that's a good thing?

I: Yes.

Q: The last of my questions is about your job at the minute, which is asking you, I suppose, to look into the future a bit. How do you think that your job will change in the future as a result of these kind of systems?

I: From a customer facing point of view, I don't think it will. It enables us, it may, with changes, enable us to offer the customer more information more quickly. Through having suggestions from someone else we will be able to offer a better service to the customer. From our own job changing point of view, I can't see it changing that much.

Q: So, any changes that happen will be that you will have more to give to the customer?

I: The information that we can provide will be more readily available and, hopefully, more accurate.

Q: Those were questions about your job, you as an individual and your job. We've got a few questions now about how it affects your job relating to others inside and outside the organisation. The first one is, how do you think your seniors, the people above you, use the system, use the information you've put onto it?

I: Above us, in all fairness, I don't think they do. They don't need to. We are the customer facing and they don't have any need - if they want information it's there, but it is a customer oriented system, and really the higher management is dealing with managing the business, as opposed to dealing with the customers. So their use of it will be very limited. They rely on the tier 1 management to feed that information back to them paper wise.

Q: One of the things that, I don't think particularly applies to this system, but there are other systems in other areas that have this characteristic, is that they are used as a way of supervising people, monitoring how much work they do or how long they're logged on to a terminal. You don't think that it's used in that way?

I: We monitor the work, we always have monitored the work and obviously there are targets that they have to meet, but the system doesn't make us spies at all in that way.

Q: To what extent do you think that using this kind of system makes your work more dependent on what others do? I mean, you've said that everything goes into one central database, it's all there and everybody who looks at it has the same view of it. Now that implies, perhaps wrongly, but it seems to imply that everybody is reliant on everybody else doing their job correctly?

I: Yes. We input information about new equipment the customer wants, if the customer's moving, the address, the Engineers in their individual role input information about the availability of the line plant in the area, the Accounts people put in independently information about when the customer paid the bill and how much the amount was. So although we start the process off with inputting the order, independently everybody relies on everybody else, for they are inputting information, ours to access, ours is about work to be carried out, theirs is what the customer currently has done, paid a bill, not paid a bill. So everybody is reliant upon everybody else's information being correct.

Q: Does that work smoothly?

I: Yes.

Q: Do you think its improved communications inside the company because of that? Do you think that other people in the company understand what you're doing better?

I: They're now able to see what we do. Previously, I don't think they had any idea. So if they had a problem, it was always our fault. Now that they can appreciate possibly any difficulties we have and see what we're doing, they now understand better what the processes are about.

Q: And previous to this, you didn't …?

I: We didn't really know what was going on. Quite often you get a customer querying something and it's about, first there's something else, "But my bill …" We didn't have a clue what was on their telephone bill. Now we can display them on the screen, see how it's set out and because we're told, "On the left hand side, it's telling me …" It's difficult to say to a customer, "I'm sorry but we haven't got the bill in front of us, we don't know what you're talking about" - now we've got that facility and we can read on the screen an identical format to what we had printed.

Q: Do you think that this system has led to more co-operation between the different functions now that you've got some idea of what they are doing?

I: I don't know whether co-operation's the right word, we always had a good relationship with them anyway. "Understanding" is probably a better word. The culture is there to develop the understanding and stop the, "It was your bloody fault, you know it was" "No it wasn't, it had nothing to do with me". When you look at the system, it was the system. We'd input as normal, something happened, the dates were wrong, and when they can see it they can understand it. Team-work between hierarchies we've always done, we've always worked very closely with the Engineers so that hasn't changed, but they can now understand, because every time they had a problem, "It's Sales fault." Now they appreciate it wasn't our fault, we were governed by our Profiles to what we could say, what we couldn't say to the customer, the wording of the order is now standard, so they can

understand that a "tele" is a telephone, but to someone outside a "tele" is a television. That is the common comparison. So it's the understanding.

Q: You also used the word "culture", as in the culture of the company - I guess that must be something that has changed a lot because of privatisation?

I: Yes. It's taken a long time, but now, we've realised that to come anywhere in the competitive market, and there's so much competition from abroad as well as Mercury, that the whole process has got to change and we've got to be seen by the customer to be there and able to offer them (pause) For years, BT had a bad name, as did the Gas Board - it's one of those, "Do you tell people where you work? - No, because it's the Gas Board or British Telecom" became a standing joke. We're now trying to get rid of that image. We do still get a lot of criticism within the press but I think it's just because to some people it's the norm, that they're never happy no matter what you do for them. There is a percentage of people who object to the policy of taking money from people in advance, they find that horrific, but the Electricity Board take £50 off you as well, but you don't see that in the press because people think, well, that's different. A telephone is still not an essential item, the gas and the electricity are, so people accept that - "Well, I'll just have to live with that". We do in a lot of cases get a lot of unfair criticism but the whole process is to try and change to meet the benefits of the customer, make them get a better service from us and, hopefully, make them realise that they're getting a better service from us, that's the difficult bit. We've improved to such an extent that their standards have risen and they expect more from us. So as quick as we improve, we've got to keep one step ahead because their expectations have got so much greater that they expect on the spot service. Hopefully, with all the new equipment in the exchanges, we'll be able to do a service within a day - in a lot of instances - for them.

Q: Just a couple of questions now about the wider organisation. One of the things that, when you read about these kind of systems is that what happens is that when problems arise, instead of trying to solve the problem in one department, you get a number of people together from different departments. Does that happen here?

I: Yes. if we have any problems where we're not sure whether they're system related or whether it's because of something we've done, whoever's been affected in the various departments put their heads together and say, "Well, we've done this" "Yeah, well, we've done this" and have a look at it and try and decide "Is it the system? Has that caused this?" and discuss it, and then if it is the system then obviously we will put in - flag it up to say, "This is a problem with the system and the software and until something can be done about it, this is the result that will cause us problems"

Q: Do you think that happens more now that you are all linked together on one database than it did previously?

I: Possibly, yes, because no one of the divisions was really aware of what the other one was doing or how they were doing it because you couldn't see it. Now that it's more readily available, the factor is, "Let's solve the problem" more than, "Let's blame them for causing it". Something had to be done if we were going to achieve being one of the top telephone companies, there's a lot of competition. We had to get some mechanism to ensure that we had - we say we've got the technology - we've obviously got to live up to that and there had to be something done. The Gas Board, the Electricity Board are computer based from their customer records point of view, so we've not only got the customer records process but we've also got the mechanism for processing the orders quickly. Really, for the sake of the company, the quality of service to the customer, there had to be something and obviously the something was CSS.

Q: I mean, there has been, in fact you're still undergoing, a reorganisation as well. Do you feel that the CSS system has made that possible?

I: Totally unrelated.

Q: Last question, you said you are a Customer Services Manager; how do you think the CSS system has changed your role as a manager, the way in which you manage your work?

I: It hasn't really changed it that much from my point of view. The staff I manage, yes. I suppose it's easier for me to check the work they've done when I do any normal standard monitoring. Because everybody has an individual User ID and Profile, it's easier for you to see, if you want to check something, it's easier for you to go back through the process and find out who did what, again, sitting in front of a screen, as opposed to wandering around the office saying, "Did you do that?", "Yeah, but before me, I think that she…" So from that point of view it's a more accurate tracking system. But the actual managing of the staff is the same.

1.4.   Walter Maner, Repairs Manager (Level 2)

Q. So, the first question is can you briefly describe the role and responsibilities are associated with your present post.

I. Repair is an application area within CSS, when I say repairs what I mean is (pause) I'll just explain my role. We have the installation control in there which looks after all the provision of service, so, if somebody rings up and places an order for a telephone or a business system or whatever, the sales office would take the order, process it and pass it to us. We would programme, plan and execute it. So I have all the control for that and also on the next floor we have the repair service so anybody who has a fault reports it to the people that work up there, the customer reception. We raise a fault and we can control the field engineers using the computer system and control and monitor the faults. So that's basically the area that I operate in. Both areas today are operating on CSS.

Q. And you're overall responsible for that?

I. Yes. So that is my main role in life is the company. We have quality of service measures, speed of provision, speed of repair, repeat visits, that's the areas that I operate in. That's what I'm measured on. How fast we provide a phone, how fast we repair it, how fast we answer a customer when they're reporting a fault, that sort of thing.

Q. What uses do you find for the CSS system?

I. Right. I use it quite a lot OK? What we use it for is we have orders or repair coming in and we create a job for it and what we use it significantly for is to monitor against speed targets, commitment times. If you placed an order for a telephone sales give you an appointment and we monitor it using CSS, the job comprises of various activities, and we monitor and make sure that activities are being progressed, in other departments as well as our own, to meet your requirement. We pick up the final activity of sending the guy out to fit the telephone. So we use it and we monitor on things called jeopardy and failure flags which is a significant part of our role. To get a speed target obviously you've to have early warning that things are going to fail and a thing will go into jeopardy and it will fail. So we are monitoring and we invest heavily on a thing called queue management. So all orders or faults that are created on CSS go into queues, queues is just like an electronic in-tray assigned to a particular guy and we, the managers that work for me and guys dedicated to it, monitor those queues in queue management. They're watching for jeopardies and they're saying "what's the matter with that job, it's moved into jeopardy". So we're looking at preventing failures really. In the past on paper systems we all, well things failed because it was lost in a bundle. Now we have visibility where we can watch what's going on and prevent failure.

Q. Is it just like a kind of an electronic form of progress chasing in a way?

I. Yes so very much of it is electronic monitoring, chasing, jobs that have fallen by the wayside so we can haul them out, producing statistics, failure analysis. So that's the area that we operate it. We use it to allocate resource because we have a queue of work, we know on a particular day for example how many provision jobs have to be done, we know the work content so we use it to allocate resource. We've got total visibility of all the work say, for Monday in there, we know now what's to be done and we look at the job it's converted to man hours and we allocate them accordingly. What we use CSS for is we can get a very good picture of the work on Monday that is coming in for provision or repair and we move repairers and providers across the place, so, for example, I can redirect the provision men onto repair work, anticipating that there would be a lot of faults in on Monday or I can look on a particular queue or team with guys in there and say "there's a lot of provision work there, we haven't got a lot of faults on, we'll send some

maintenance men down on supervision". Now I use it, the system, my job is resource management, so I use it significantly to redirect resource and to balance between two, what were two unique disciplines and now merging them together in the field and multi-skill the guys in the field and this is the mechanism.

Q: And that works OK does it, you don't have any concerns there?

I: The only concern I have is you can't beat the cheat. If someone decides not to put it onto the system. For example if he gets a sticky letter, and he's hidden it away at the bottom of a pile, if he decides not to put it on I don't know what you can about it. There are other things you can do. You can de-escalate cases. What happens is they recognise that certain types of complaint take longer, now after 8 days, the system automatically escalates that and throws the complaint into what's called jeopardy. Now what should happen, strictly speaking, is anything which is escalated I should be able to view on the screen and de-escalate that complaint back to him. I can look at it and say 'well that's OK, I know what's happened with that one, I'll give that one back to the commercial officer'. But what they have is a facility that they can go into the screen and de-escalate it themselves. So if they're in before me they can actually de-escalate the case themselves. So until such time as it had reached the stage where it had gone to the next level, and they couldn't do anything about it, I wouldn't actually know what was going on.

Q. Are there any other uses that you have for the system?

I: There's a messaging system for example on CSS. I have staff, some of which work shifts. I find that messaging system is one of the best elements of CSS for me because I know that I can message people on my staff instantly. I can write any message I like on the screen, put the guys identity in, and I know that when I press the button he'll get it and if he's not there the first time he comes in to work and goes to the screen there'll be something there saying there's a message for him - so I know everybody gets told what I want them to be told.

Q: How is all this going to be affected by the reorganisation?

I. Under Sovereign?

Q. Yes under Sovereign.

I. It is very much in-line because although we will have business communications and personal communications currently I look after business and residential but we're going to split it into business and personal. With within personal communications or within business we will still have joint repairers and providers although they will be working on business work and one lot will be working on residential. So Sovereign won't affect the principle - we'll be working in more or less different companies within the company.

Q. But they'll still be multi-skilled?

I. Yes. The job I'm going to do under Sovereign will be on personal communications and I will be responsible for virtually what I do now but the business element of the work, the business customer will go into a separate organisation. We will do all of the residential customers, provision and repair and also all of the network faults in provision up to a distribution point. So we will definitely be working in the business area as well but doing the network, underground cables, etc. So we will use CSS or whatever integrated computer system you want to call it very much so in the future even more than we are using it now. So resource allocation, prevention of failures, monitoring of jobs, statistical information is the areas that I use it for significantly. I have responsibility for meeting the speed targets now I've got to monitor that and I use CSS, well CSS statistics, to monitor that thing or statistics based on CSS data. It isn't actual CSS it's a

package that links into CSS and hauls the data out. So I do use it to monitor customer supplier agreements within the company.

Q.   You mentioned a package that dips into CSS, what is that?

I.   Yes. It's called, well we call it MIS, management information system and it's a focus based thing. It's a separate machine, it looks into CSS and gets hold of the data in there, hauls it out, number crunches it and gives you the statistics.

Q.   And that is the information that you were referring to just there on the monitoring times?

I.   Well, monitoring performance, but I also, the quality of service results that the company publishes in its board reports to the public shareholders, etc. It's all produced from this thing.

Q.   And they're published what, every quarter?

I.   No, mine, if you talk about mine, I get statistics off CSS on the hour. I get extracts hourly, once a day, weekly and monthly. The district reports monthly to the centre, central HQ. So all the statistics that I produce, the daily ones basically are for me and my immediate group of people, we're monitoring how we're doing all the time. Weekly ones are generally just within district for monitoring how we're doing, they're compiled into a monthly figure and monthly is sent to a central point and each district's results are put out in a what we call a league table and then the company reports, quarterly reports, etc. are created from those.

Q.   I think that's given a very good indication of the uses you find for the system. Another question I would like to ask you is would you say that you spend less time now in collecting information as a result of the introduction of the system?

I.   The problem with it is I probably spend more time looking at things because it's available. In fact I spend probably twice as long now than I did before we had the electronic system, not collecting the information because I can press a button and get that information.   Prior to anything like this I relied on other people to give it to me and it wasn't as up to date. For example I was in here early this morning and every morning I come in and I take that off-screen, although somebody does that for me at 9 o'clock I'll look in and just find out what's going on. I've got access to everything on-line that is very useful. Because what it does it allows me to keep quite a good overview and it helps to keep everybody on their toes.

Q.   Fine. OK I'll move on a bit more quickly now. How do you feel it's changed the way that you work up to now?

I.   The main thing that's happened to the way I operate and the management team is that we are now proactive, we can anticipate failures where before we just dealt with failure analysis, everything was after the event. We hadn't a clue on what was going to fail, we picked it up on a daily, weekly basis and say oh those failed, and let's look at this, stop that. Now we're looking before the events, "why is this going to drop off, yes OK" and get something done. That's the main area.

Q.   And how do you, this is looking more to the future perhaps, how do you see your role changing in the future as a result of the development of systems like CSS?

I.   I see it changing significantly. I see CSS overtaking the resource management because I know it's going to be developed into things called work management. I can see the overall staff that work with me directly or indirectly reducing significantly because there'll be direct allocation of work into the guys in the yellow vans without going through my people. My role will be more

watching for log jams, the queue management role that I talked about, I would probably lead a team of people on queue management only and we will cease to allocate work, the allocation of work will be done automatically. Currently I operate probably 60 people in these controls and a third of those will run it quite comfortably when we have work allocation directly out to the field staff. So will have to look at it very, very closely because the guys that we want to retain on the new role will be the more highly skilled ones and they tend to be the younger ones. The older guys who are struggling now to re-deploy them, the only place we can re-deploy them is in the field and they're out of date with the technology and they're physically not up to it. So it is going to be a very, very dark area and I do anticipate quite a few problems. Upstairs I've got 27 guys and 21 receptionists. The receptionists will always be there. So you ring in, you report a fault, one of my receptionists takes it, creates it on the CSS and then it goes into his queue. Now the role that I see my job becoming is what we call resource management, I call it resource management- making sure the work wasn't queuing up. Call it queue management, watching where things are. But the problem area for me is I've got 27 people up there now and I reckon I'll need 7. 7 guys. So the 27 guys the best ones, most of them are fairly young guys and the others are the older ones who are struggling with the system, some mid-50's towards late-50s and they couldn't cope. So what I'm going to do with them I don't know.

Q.   There are one or two questions about how the system influences your working relations with others inside and outside the organisation. Does the system enable you to exercise more control over your subordinates would you say?

I.   Yes definitely, from the highest to the lowest, yes.

Q.   How does that operate?

I.   Well, they report to me on various things. That will mean nothing to you but that's a failure analysis of a particular statistic, and CSS enables them to get that information, and they report to me on that, OK. So what they can do is an in-depth analysis of what's gone wrong and feed it back to me. So what that means that is a very tight control on this level 1 manager. He's having to report to me weekly on the number of jobs he's done in that category and where they've gone wrong. Now in the past he couldn't have got that information so he's totally accountable for that result and he knows that I can pick out, well just picking stuff out for him and saying "why did that happen?". So I have statistics, visibility and I can exercise very strong control by putting control mechanisms in, not necessarily looking in the system but saying "you can get that and I want to know". The thing that I get for example a constant problem we had before CSS the sales office took an order and they booked an appointment and we had a system where the level 1 managers had to go into the sales office and every day allocates units of work for sales appointments. So what would happen is the sales person would take an order and write the order in the book and when the page was filled she'd move on to the next day. Now what happened then was then she would just go on filling the book up and go out of speed, she would be issuing orders beyond 8 days where we shouldn't issue, we measure how many orders were complete in 0-8 days. So what happens is that now the level 1's have got electronic appointment books and they monitor them. Now I've been able to say to them, I've written a controlled working structure that says you must monitor your queues, your appointment books three or four times a day. And how I know they're not in trouble is I get a clerical assistant just to go in across all the appointment books and jot down on a pro-forma the pipeline on all the appointment books and every day she'll being this in round about 12 and for two minutes, or a minute of my time I'll just look round and any appointment book beyond say 5 days I know we've got a problem. But because she does that we never have an appointment book beyond 4 or 5 days. That's my lead time, I know that if I can keep the lead time on sales appointments to 4/5 days then I can out-turn 90% on speed. So that's the control I can exercise without looking in the system, they know that I know what they can do, that I've got measures that come floating into here which after I look at it, it just goes straight in the bin unless they've got a query.

Q. But you said there, didn't you, that you do it often first thing in the morning?

I. I access the system probably 10/20 times a day.

Q. And people know that you do that?

I. Oh yes because I ring them up, I'll just ring one of them now and say "I've just looked in here, what's this?" They know that the statistics, I drop my wife off on a Friday morning, she's got a part-time job at 7 so I'm in here at 7.05 and they're still in bed. This morning at 7.10 I knew how we'd done yesterday and they know that I know because as soon as I see them I say "what happened here?"

Q. What effect do you think that has on them?

I. Oh it sharpens them up. I'm very conscious that it can sink them but I think they know that my motives are not to screw them down into the ground, I've explained to them why I do it is to keep them sharp and they can tell their staff that I'm doing it, that sharpens the staff up. There's never what I would call a rollicking there are harsh words spoken but the motive is not to undermine their authority, it's not to screw them down it's to keep the job going. They know that. All I'm interested in is I'm interested very much in the people, they know that they get fairly good development, they know promotion is there if they cut it, this is my way of measuring how effective they are. It isn't just a bottom line result it's how they move within the system. I don't think, they might feel threatened by it I don't know, but I've explained to them my motives. I don't do anything nasty with it, other than confront them. Take Marvin Croy, you might have interviewed him, at 8.10 on Monday morning he was getting the bollocking of his life off me because his results had slipped. Now he had just come in and he said "well I haven't seen them", and I said "that's not my fault, if I get results like that off you next week you're going to be in serious trouble. Now I expect you to go out and tell your guys that". He wasn't a happy man but he came back on Monday night and he was totally fired up "I've done it, I've done this". I said "Great, thanks a lot, but do you understand why I went at you this morning?" he said "Oh yes". He wasn't happy at 8 o'clock but by 5 it had filtered through and he'd found some significant problems.

Q. And you got that data from the system in the morning?

I. Oh yes. All my statistics now are on MIS and as it happens he is based on weekly statistics and I had that data as soon as I came in this morning. If I'm here at 6 I can have it at 6, that's a major advantage, you don't have to wait for anybody processing information or giving me what they think I would like. I just look at everything and home in on certain things. The other major advantage is because we operate in my work area on a large combination of statistics, a very wide range and with CSS they are very complex and what happens is managers tend to focus on two or three of the key ones but I can look at all of them, tail measures[2] etc, which are very important for customer's perception. For example temporary clearance of a fault. If you repair a fault on your line, OK, they might tie a knot in the wire outside and we put it on the system as a temporary clear. In the past a temporary clear could last for a year and then it would go faulty again. On here we know and we measure our performance on temporary clearance of faults. If we've got monitors in place that say well that's been outstanding for 3 working days you've got to do something about it. So there's a Hell of a lot of tail measures we pick up and the overall thing of course is quality of service.

Q. Right. Do you find that you spend more or less time supervising your subordinates?

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[2] Results that lie in the "tail" of a distribution, i.e. are much larger (or smaller) than the average.

I. Probably more because the more data you have the more questions it begs. Supervision is I spend more time in contact with them, I can put this job into context it's probably one of the busiest in the district and all my staff are located here and I spend probably 7-8 hours a day with them. I've got 9 managers so obviously I'm not sitting with, but dealing with them probably between 8 and 5 all day, every day. Paper work, etc. I tend generally to do after 5. So the more information I get the more problems become apparent so the more time that I do spend with them. I don't like the word supervision because with a group of managers I work with them more than supervise. It depends what you mean by supervision I suppose, interpretation. Guidance, coaching, whatever we want to call it, communicating with them.

Q. To what extent do you think then having a system like CSS has made your work more dependent upon working more closely with others?

I. Well, it's made it very, it's increased because I'm more aware of what's happening and I'm more in touch with people like the guys that work for me. They are more in touch with other departments. If I spot a problem I'll say "well can you have a look at this", they would look at it and it might be something the sales office are doing. So we are very much in touch with sales office people who create orders for us, we discuss stuff with them in-depth and we can see what they're doing wrong at order entry parts and discuss with them and it does work very well that dialogue, we have made significant progress.

Q. Do you think that the system has resulted in to any degree in the formation of inter-departmental teams to solve problems?

I. Yes.

Q. Is there any particular examples?

I. Well, we've worked closely with, in my organisation, the sales office, very, very close. We've had teams looking at various things.

Q. And have they just come into existence to do a particular job and then disbanded?

I. Oh yes.

Q. Very much project teams?

I. Pick a problem up and have a look at it.

Q. But not to anything of a kind of permanent nature?

I. No

Q. Are there any ongoing problems with that?

I. I must be honest and again this sounds too cosy, I personally haven't got any problems. My level 1 managers tend to think that there are little barriers there but certainly at my level there are no barriers at all with the sales office people, the billing people or anything like that and we work very well together. The lower you go because you have more people then you do get a certain engineer or a certain sales person and they clash. But largely because I've been involved with this work area for quite a while the barriers that did exist 10 years ago, and that was prior to CSS and everything, are certainly down and there's been a Hell of a lot of things happened within the company apart from CSS, total quality management that thing, customer supply agreements and

all that, so it is more than CSS. CSS is a tool but the culture's changed within the business within the past 3 years, significant changes in culture, a lot of training etc., and quality management which I think has got to be

Q. Do you think the cultural change, how would you summarise that if you put it in a nutshell?

I. An awareness of the needs of others. Customer supplier relationships. Nobody recognised that the guy in the stores was my supplier and I'm his customer or whatever. The customer was always the guy on the street and of course you'd get departments saying "well I haven't any customers, I don't interface with the public". Everybody has been through total quality management training, customer supplier agreements, importance of an established, documented, monitored that thing.

Q. Would you say that CSS as a system has made an important contribution to that change though because it has given you the kind of information that you needed to management to business more effectively?

I. Yes. You have more information to measure the business effectively. That's the only thing it's done in that area. The cultural thing wasn't driven by CSS. However, even before to a certain extent we realised on the provision side that the problems with CSS were a joint problem on order entry, order handling and billing and all the rest of it and it did, we set away down the road when we found out all this lost revenue, etc. So CSS did help in that area because we were able to recognise a problem that wasn't just my problem it was a company problem, it impacted on the accountants, it impacted on the sales because they were picking the queries up, so yes and we ran courses and we had mixed disciplines, accountants, billing people, sales people and explained the philosophy of CSS. So it has enabled us to come together and have a common understanding of each others work areas without a doubt. That was not, that was CSS, the enabling factor was CSS but what had to be done was after a year it had been lying in the district we realised that managers hadn't been trained correctly and we ran a series of queue management courses. As I mentioned to you before Dave Armstrong and I did it and we had sales people, everybody who were in the ordering process chain participated in that and that created a greater awareness and enabled us to see each others problems.

Q. I just wanted to get that clear. Am I right in saying that you're saying that one's got to put CSS alongside other important changes that have occurred, CSS is important but it's not the only thing and alongside CSS you would put things like Sovereign, major cultural change, greater emphasis on training and development, etc. So if I ask you to weigh, since we are focusing on CSS, if I ask you to weigh the technology alongside those other things what weighting would you give it? How would you rate its importance in the sorts of changes that have occurred that you've just been describing?

I. Very important. What weighting factor do you want put on it?

Q. I wasn't necessarily to put a number on it. Just your impression.

I. Very significant. It's brought about a significant cultural change in what I call the sharp end of the business, sales, billing, provision of service, very, very significant changes. The objective was one point of contact for customers and to enable us to deal very effectively with customer queries and to reduce manpower and I think what has happened the evidence today justifies the expenditure although it needs improving but at the end of the day given another year to two to get from point A to point B. You just cannot go from those two extremes and CSS is the thing in the middle that makes it all happen. The role of the manager in the past has been an administrator, a guy who worked to things called, well TI as well call them, a book and it said we have a civil service attitude.

Q. That's telecommunications instructions?

I. Yes, but you opened that and said you handle this problem in this way whereas CSS has changed that he's got to be proactive, he's got to find quick fixes for problems that are not documented. If he sees a job going into trouble or a queue he's got to take corrective action. My role has moved that way. I spend more time, as a result of the information I get I don't employ a clerical assistant to give me information. So I look at it, I spend more time looking at things in here but the consequences of hauling all this out are that I spend more time with the people, the guys at level 1 managers, the DDG's even in talking to them about problems. Yet in the old days that is only three years ago, I was getting information a week to 2 weeks old and I would just have to bring the guys in and say "well what can we do about this?" Now it's live, I'm out there, I'm saying "look we've got a problem what will we do with?" The lowest level in there interacts with me, you don't cut the managers out. Now that is the change, I don't spend hours looking at statistics that are going to go up the tree and making them look white or changing them round so they look neat or designing forms you know, I'll say to my boss "if you want it it's here, come here and I'll show you the screen" or I'll get a C.A. to zap, to take a screen, and take it up to him. That's the thing. So the cosy role of the administrators, well I administrate very little. You can probably see by my office it's not an administrator's type of office.

1.5. William Betchel, District Billing Manager, (Level 3)

Q: I'll just briefly describe what our aim is. We're structuring the interviews with people who are decision makers and information providers. Typical decision makers will be more senior people and information providers will probably be people a little lower down. I would guess that you would be what we describe a decision maker. Would you describe yourself as a decision maker or an information provider?

I: I'm both.

Q: You're both. Okay.

I: You've got a unique situation in the receipting centre. I manage the receipting centre on behalf of every district in the country. So if you look at that map, the way it's divided, there are 26 districts. I manage that centre on behalf of the 26 managers in there but I'm also one of those 26. So it's unique. I don't think I've ever come across in the business whereby the decisions that I make in one capacity come back and affect me in a totally different capacity. I'm affected the same way the other 26, but I make the decision. Not a popular thing at times. That's a classic example but many ways the decisions I make come into every possible link in the chain that you could think of. The bill is the key in the link between the customer and the company in the same way that the telephone is the link between the customer and the company. Everybody gets a bill, not everybody gets a fault or a complaint or buys new equipment, but they all get a bill and they all our customers.

Q: Right. The system that we're focusing on is CSS, the customer service system: the database with all of your customers on. So how do you use the system?

I: The answer is I use it constantly but not necessarily in the way in which you would think. You see every piece of information that I get on the billing front comes from CSS, apart from one or two minor systems. If we are talking about CSS, every decision I make with billing is based on information that I get from the system. Now the decision I come to is also based on a lot of my own personal experience and background, but the facts of the case come from CSS. Oddly enough I rarely go through the terminal because the information I get comes in printouts like this. (Points at large bound pile of paper - his 'book') What I have managed to do is to compress every statistic I get into a book that my staff prepares for me. So the whole basis on which I manage the group is from the information produced by the system, from information in here (his 'book'). Now where they get their information is from lots of reports like this (points to very large pile of print out in the corner of his office). We work on a pyramid basis really. The COs, the clerical staff, get the broad printout of how they deal with each individual customer. The level 1 obviously has got an overview of that, and sufficient knowledge and details of system, to make sure that the staff are doing their work and things are being responded to. Within that there is a tremendous amount of information, there is so much information that I could not possibly manage the group on that type of information, but a lot of those printouts have a little bit of information that I need. So, what I do, is I have a filter whereby one of the managers knows the information requirements I have and they pull off numbers from different printouts to provide the overall information that I use. I can open this at any page - month analysis of debt? - Right, that tells me what the problems are on that part of the system, where they're lying within each group, For example, why has 8T23 got 65% of post payments, right. Now that is something that I may wish to follow through. Say we had a particular serious debt, somebody not doing their job properly, and now there's no way I can get that from the mass of information. That is the problem with the system, it's so big and so huge. It has got a bad reputation, particularly among billing managers, for not providing them with information to manage. The truth is the opposite, it provides you with too much information to manage. It's a bit like the way the Americans censored information in Vietnam. You give them everything and they think 'wow this just isn't interesting any more'.

I find that I desperately need a filter to give me information in here to manage with. This ('his book') is a broad summary. Now I can interpret that. That's telling me where my number of suppressions came, so why has all this gone up, because we quarterly bill. Why has it gone up 0.4%, now is that significant enough for me? It's not really. If that continues as a trend says August equating to May and June equating to September I'll look at that one again. All that information is there, it's just getting it, that is the key.

Q: So, you don't use the system much then?

I: I would say I always use the CSS system but if you expect me to go through a terminal and start getting this information out, no. I rarely use the terminal on that basis. It is an operating tool for the managers. I will manage through them on the information summary they give me. Having said that, if I didn't have CSS, and I had another and better system, I would still manage in the same way. What you're talking about is the content of the information behind that (his 'book'). Take CSS away I would want, given the nature of work, to have something quite similar to that (his 'book'). What I want to know is what is the performance of the group, where are my resources are and how are we responding across the whole spectrum of the North East district. That is what I require and the basis on which I do that is from all the information that's pulled together. I'm a compressor of information. The real problem I found with the system was that it gave you too much information to the extent that you had nothing. You had to go away and find out which reports gave you the viable information. Once you found that how do you pin it down to the individuals, to the individual manager, to see if he is or isn't performing?

Q: So, what you're saying is this system provides you with too much information and so you still need to go to people to prepare reports for you because there is far too much information. Do you use the system to find their weaknesses and then go to them and say 'look you're not performing'?

I: It depends more on the individual there. What they found initially with the system is that they've had a wealth of information as well. We spent a lot of time in digging in to the system to find out what is what. We've only had this system for a relatively short space of time, we are still trying to get the best out of it. In fact we're going through, as you probably know, a huge reorganisation and the way in which we organised ourselves into the system is going to be the key to how we develop. Because this is a fundamentally different system to the one that we had before some of us felt we should approach this one in a completely different light. In the past, say the billing clerk, would handle each element of a case. In other words you would be their customer, they had a number range, if you rang the office, and said what number you were, then we put you through to the clerk that's dealing with your particular number range. We thought 'well this system's now just too big for all that' so what we'll do is we'll have somebody dealing with getting the money off you, somebody dealing with the actual production of your bill and somebody dealing with how the bill is diverted. In other words, you chop the jobs up a little bit and you continue to chop them up. Now, for example, if you ring in with a query someone will answer the phone who would never have dealt with you before. They will access the system, answer your query, or you will write in as we've now got an enquiry support group, and the person who is going to say 'well come on it's about time you coughed up your cash' will look at the screen and say 'hold on, he has rang in with a specific query. I will access the system to find out how that query has been dealt with. Ah the query has been cleared so why has this person not paid yet?' So we continue to follow up. Or 'this person has written a letter and a reply has or has not gone out, seems a bit of a long time I will now start to chase this one up with credit control point of view'. So you've got numbers of people who are now involved in the chain whereas in the past there was only one.

Q: You mentioned you were in the process of reorganisation and what this is made possible by the development of this system. Presumably you were saying you've managed in the past where you

had one person dealing with everything but now you can split it up, and that wouldn't be possible without the system?

I: It was not possible under the old system. In fact it was not possible at all because we were keeping a record of you, right, on your exchange. So, when there was a query, somebody would have to go and physically access that card where the information is held. Now somebody else might have queried at the same time from your exchange, which is not unlikely because all the bills go out together, so what you would have had was numbers of people fighting over the same little bits of little paper, whereas now it's all on the terminal. That was always seen as one of the biggest problems in functionalising work, the access to certain types of information that would be required by a number of people at the same time. Now we can send out your bills all on the same day, everybody queries from that exchange and everybody can be accessing that individually without having to go through the card records.

Q: Do you find the people use the system properly, because everything relies on it? I know that when this idea was introduced into manufacturing companies, people, perhaps people on the shop floor, don't realise the importance of recording the fact that they've taken something out of stores and so it doesn't get onto the system. Do you have that sort of problem?

I: The answer is yes we did have that problem. We thought that this was such a fundamental change in the way in which we're handling stuff, you use the terminals, you use computers, and you use the keyboard. We had a number of people who have been around here for many, many years who objected to the change in working practice that we brought in. We had quite a battle with the staff and the union to bring it in. In the end it went, kind of, 'Ah well, we'll give it a go and if it works it works and if it doesn't well obviously we'll go back to something that does work'. There was a lot of fear and resentment from staff, and that triggered a lot of the adverse reaction to changing the work patterns. Now some of the younger people got on very quickly into the keyboard, because I think the keyboard and computers are very much a younger person's background. A lot of reservations from older people, people in their 40's and 50's particularly, but we never got one failure, not one person failed to come to terms with the system. Now I was astonished at that and I was talking to our implementation manager saying I was surprised. I had a few people down as casualties with the system but he said 'well, we only had 3 people who needed to come back and be retrained', and I think we only had one failure, but I would not call that a failure of the system.

Q: Yes. And that was out of how many? 1000s, 100s?

I: Well, in my patch we had about 250 people and no failures. 250 people and nobody failed to come to terms with it. OK some people are better than others but that mirrored the reflection of the job anyway. So the answer to your question is nobody failed to come to terms with it, which if I was sitting in your position, I would not believe - but it happened. These are all clerical staff who were happy with the old system and yet there was not one failure. Now I am astonished by that but it also occurred in Middlesborough. We had 3 offices in Middlesborough, Sunderland and Newcastle and there was not a single failure in any of them, OK some are better than others, but that mirrored the job ability. So the answer is I was very surprised. I think this might be the exception that proves the rule I must say that.

Q: What sort of skills do you think are needed to get the most out of this system?

I: Where do I start? I think the first thing is courage. You've got to look at the system before you start and be prepared to radically alter the way in which you're doing things. It's not very easy, I saw this happen, folk who just didn't want to know, and I wouldn't say I've got particular courage because I was temporary at the time. My career would have gone down the tube if I'd been wrong. Look at what is happening around, work out from your experience what is likely to

occur and have the courage to run with it from day one, because it's very difficult to change it once you're in. So number one is courage. The other is a flexibility of thought. It's always easy to be right in hindsight, the trick is to see it very early on where some of the trends don't always go where you expect them to. So I think you've got to have a flexibility of thought and a knowledge of the overall job to then respond to the individual quirks that are going to occur. Then to build on your original decision. I would say do nothing, just sit and think and read the overall specifications. Look at the plan and just think and think and take advice from a number of people and then go ahead. You've got to go ahead very much with the commitment of your management team. You've got to get your manager behind you and thinking the way that you think, because it's no good being right and saying 'I have courage, I am right' if the other folks are thinking well I'm not too keen on this. If you haven't got them with you they won't make it work. So even if you're right, being right's not good enough. I've learnt that. You've got to have the belief of the people you can trust. If you've got your doubters you've got to attack them, you've got to bring them along. The other thing is, at the end of the day, you just plain cheat and the people that you aren't talking with you, you get them, and you say 'look they make it work, you don't make it work, we have a problem. Now they're giving it their all, you give it your all and if I'm wrong well I'm the one to carry the can'. You try and reverse the roles, some way you've got to get the commitment from all even if it's for the wrong reasons. I have found that once things are working everybody is with you, it's the old football joke, everybody will go and watch a winning team and everybody will say 'yes that was a great buy you made there but a few months earlier'.

Q: What was it like then?

I: Looking back it was a lot of pressure, 'which way we should go?' and I think in any big system change that will always be there. So at the end of the day I think the one quality is to have the courage of your convictions - but to have those convictions you've got to look at what is happening. It's not good just guessing. Once you've got that, you've got to take the people with you. They were the big things, lots of little things come after that. The way in which you approach the information - everybody goes for quality, let's get it right first time and every time you don't have to do that. If you get the important things right then you're away. Then fine tuning, in many ways, becomes the most difficult because, 'eh I was happy with this, why do we have to change that?' and 'more change!' Then I notice the resentment coming in. We were the first part of a national roller now everyone wants to come and see us. There was a pride, and then I got to the second stage, and we had quite a conflict with the union about that. 'What do you want to change it for now?' The staff got more resentful the second time around because all of a sudden they found there was a second leg and it was a whole football season. Now that was far harder than it was the first one. You know we don't have to try any more, it's 'Hartlepool has been promoted, they're a first division team now, everybody is happy'. It's when you think you've succeeded that your real problems start. That was the hard part. On reflection I've never thought much about that, but on reflection it was the second move that we did, when we fine tuned it, and tinkered about with the practice, not major changes. We found that staff are keen, when they've got something new turning up there is the worry of the technology, get over that which is very hard but at the same time they're receptive to change, they know you're going to change, you know a massive change. The reaction though was 'Bite the bullet and get on with it.'. They were expecting change, but the second time around it's always going to be change. Now that is a far bigger problem. We're going through that now with Project Sovereign that is big. You know, I'm starting again, so now I've got the sleeves rolled up, I've got all this stuff and that stuff and piles of information there and the meetings this morning about how we're going to do that. I've got to sell that to folk downstairs, that's the hard part. A losing team is easy to change. You know England got beat the other week by Poland, yes let's have a few wholesale changes, no problem, but when you win and you win well. It's an interesting point. This is the first big major cultural change I've ever introduced. The people who have failed, was it because they didn't attack the expectation of staff that it will change, radically change, the

working practices or did they just put it in and then didn't fine tune it because they've done one change and that's enough? I would never have thought of that a couple of years ago but having gone through that I learnt a number of things that consistently surprised me.

Q: Were there any other problems?

I: I think any major change in the way in which we use the system is you've got to spend a long, long time before you do anything and I think unfortunately there's never enough time. There is so much pressure on people to bring in a system for change. Like I want this change in six months, but we were thinking about two years. But I need it in six months. There's pressure and you usually find that the guy with the pressure for six months will get them to agree to six months, he'll then turn round and say I need it in three. Folks do not spend enough time in thinking about the impact because if you're going to be using a system more efficiently that usually means you're going to lose jobs. OK you can say there's going to be a better service to the customer both in terms of reducing costs and because customers might see something that is more friendly to them, they'll get their phone quicker and on time and things like that, but the majority of customers saw no difference from the CSS system to what they've previously had except the bill was printed differently.

Q: How do you feel that it's changed your position in the company? Do you feel now that your job is more secure, you've got better status through it? Are you a loser or a gainer?

I: It's an odd question that because given my personal background I've found that the job has moved to more to what I used to know than what I came here to do. I see me getting back to normality because the systems here I thought in many ways were quite antiquated. I used to equate where BT had gone in systems terms from Stone Age to Star Wars overnight and that was a big cultural gamble and I'm surprised that people managed. On the other side I would say I was probably already in the 25th century in comparison so it wasn't the same leap as me. I have leaped forward in technology, I must admit that but I haven't gone far, if anything I went from there, to there, to there in quite a rapid stage. Increasing status? I'd say ask me in a years' time because we are reorganising around various things. I think you will probably find a number of managers at my grade who would say well their status has been reduced. I think that the job is continuing to evolve. The question is does it evolve to my expectations? I've always believed in the simple thing, a job is what you make it. So at the end of the day if my status goes down I think that's probably got more to do with me. I haven't seen anybody in life ever getting downtrodden if they had a bit of go or a few ideas about them and had a track record of success, there's never a problem in placing those people. The folks who fail and they are the people who are lost. So I think the winners will win and the losers will lose irrespective of the way the technology goes.

Q: You said come back and ask you in a years' time, can I just ask you to speculate about how you the future of this development?

I: Well, that's a simple one. (Pointing at map on wall.) At the moment I cover that and I've also got a receipting centre that covers the whole of Newcastle, Gateshead and Durham. I'm now taking over that and that. So now I've got the whole of that but I have lost that. So I end up with more, and I end up with less, at the same time. The division has collapsed a bit but at the moment I look at the up-front customer contact. What I'm now doing is I'm focusing much more closely on the personal communications. A big part of the job with me is the systems development. So, I've got some ideas on what will happen but again come back in two or three years. I believe you've got to have the courage to go through and start again building the organisation, building the resource and building on what I've already done once which I'm now seeing being dismantled in three different ways. I've also got to take on two new territories that I know

nothing about, but I don't see this as a final solution, it's going to be a considerable change for me and I'm just wondering how that's going to go.

Q: What does this mean to you? Is it going to mean that you lose contact working with people or you become more involved with people or what?

I: No. What I see it means is I've gone back several years to having a spread out empire because I've made a lot of savings by bringing things together and all of the focus of the job has changed. I'm happy with the idea of 'look I don't want this up front stuff, let them have the easy stuff'. The business and the personal customer are two different ends so I'm not too worried about that split. Now we're thinking of slicing that the whole organisation into several different component parts and you've thin sliced it into seven operations. The question is how do you tackle that given the fact that the system enables us to focus more into the different parts? You couldn't have done this before, so, one we've got to grasp that as a concept and two what is the best way to approach it? I've come right back to where I was two years ago. It's a good example of a manager coming in full circle. I've been given a problem, by and large resolved it, and was just about to sit back and think 'I've got the whole division at my fingertips, It's all there, I can manage this division without moving away from my desk', and it's taken me two to three years to get to that stage, now I've got to start again. Come back in a years' time.

1.6.   Mike Flex, Sales and Customer Relations Manager (Level 3)

Q: How is CSS actually of use to you in your work?

I: Well obviously it is essential in terms of the function that my people perform, it's a working tool. But out of that would come, would be generated management information relating to the throughput of work that is done and also indicators of failures and inefficiencies in the system. Every month, for instance, I would get a computer generated listing for the amount of work that had been processed through the sales office.

Q: Do you use the system in any other way?

I: What I find of most use is the messaging system. If I've got a message to all my team, I write one message and I press the button and what I do is put PC64 which is my reference and I've got a distribution list set up with that and it goes to all my managers. Before I would have to get someone to photocopy all that and then post it out and then people would have to deliver all of those letters. It's there and it's on their desks and I can even tell when they've picked it up because if I put an acknowledge at the end of the mail I know that they've got that. So if it's an urgent message I can tell who's got it and who hasn't got it without having to ring anyone up or chase them up saying have you picked that up. So it is a great boon in there they've got it in right across the country so I can actually send to somebody, as long as I know the name of the person. I can send the Chairman a message if I wanted to or I can send somebody down in London a message. I don't have to know his telephone number, I don't have to know his address, I don't have to know anything all I have to know is his name and whereabouts, what area he's in and I can send him a message.

Q: Do you think that any new skills need to be developed to use these new systems?

I: I don't think it makes any difference. The way I look at it is that to manage effectively, my simple definition of management would be to achieve objectives within resource and time constraints, either or, yes. You need to be able to analyse information about your workforce, the work that's done and the quality of the work that's done. Having an integrated system and the system should, if it's been properly designed, provide quicker and more accurate information to the middle and senior manager but if you haven't got a computer system there you still require the same information. The skills are not machine related. For the manager of the future then I would suggest that what would be of benefit would be more keyboard skills and shall we say familiarity with using the system which at times could help them to pull off the information direct when required.

Q: And have they resulted in any skills being lost?.

I: Certainly. The deskilling of knowledge workers has taken place to a dramatic degree, absolutely, unbelievable. I think probably the best example of that is if you take the example of the clerical officer working in the sales office handling orders. One of my previous jobs was an operator services manager. I was managing the telephone exchanges that employ the girls who put the calls through. One of the promotional avenues from that operator job used to be the clerical assistant and then the job progression from that would be a clerical officer within the function. The sales office clerical officer is recognised as one of the most knowledgeable and skilled people in the BT organisation. When I took over this job a couple of year ago and was sitting down with some of the staff who were handling orders, the sort of comment I was getting was "it's a great system but it's taken all the skill out of the job". At one time you had to know everything in terms of what the customer could ask you but now the system does it for you. I may as well be back in the exchange, that sums up that one. And there is limited, the loss of the middle management layer not directly through the system but that would have helped and the

direct access to data by senior managers, yes, I mean that does happen and it can be unnerving I would suggest for people. If on occasions as I've said I've looked at the job at 5.30 at night and spotted something the fact that I may then come in the next day and ask a question of the, I might skip the management there and go back to the major manager and say "look what's happened with this?" and they say "well hang on when I checked on CSS it indicated that".

Q: Tell me, what was the justification for the system in the first place, was it just cost?

I: Don't ask me about the cost justifications because I don't think that was ever actually explored and quite frankly I think there are certain types of capital investment decisions which do not work in business cases. If you decide that you're going to have a High Street presence then you've got to buy shops. So I suspect it was more of "we will do it". But before we had this system in terms of major deals with our customers and I think we had about 15 large mainframe computers that were dealing with different aspects of providing a service to the customer - A lot of duplication. If you take for instance that under that previous system for every change, for every order we took from a customer the telephone number, name, address, job number would be input into 15 different computer systems. Plus the fact I think from a, shall we say a more political viewpoint they wanted to get away from major computer suppliers because of industrial relations problems and things like the staff association by pulling out a handful of people from the key establishments that could cripple a company. So I think those would be the real reasons behind it.

Q: So, cost did not come into it?

I: Of course it did. I mean we have got a policy, and the policy is a reduction of costs, to be honest with you. I don't think it's any secret the fact that we, as a company, are responsible to our shareholders. Every department in BT is looking to make cuts. Well we've lost half our managers. But if you're losing staff you don't need the managers to manage them. It's simple economics and that's the way it goes. We're losing managers as well as losing staff, it's not a one way process. What was decided was to thin the layer of management. There were 11 levels of management, up to the very top, so from my managers under me up to the top you had to go through 11 steps. Then they trimmed that down to 6. So if we have an issue we can escalate that issue very quickly.

Q: So, part of the aim was to remove layers of management. How did you go about it, did it all go smoothly, how did you decide who left and who stayed?

I: The official party line is that it's people who are not seen as having a role, the general characteristic is that they're over 50 but there are some a good deal younger than that. We're losing 80 managers out of the district, now some of them are absolutely delighted, it's wonderful. The terms they have! They have these enhanced terms, as if they were retiring in 6 years time with some additional benefits, some people are going off at 50 plus with a decent pension and they're absolutely delighted to get out, especially with all the changes that are taking place. Some managers work has already died and, being in their 50's, there's no advantage in retraining them so, for us, it's been quite a humane way of treating them. People want to go because a lot of them have given a lot of good service, over many years, and they find it difficult to adapt to a new regime, new systems and new thrust of business. We've gone through a process of identifying targets and managers that don't have a place in the old organisation but we still haven't developed the new organisation so it's back to front. We should have set up a structure put people against the jobs and then identified who was surplus.

Q: Is there is a link between CSS and Sovereign then?

I: Yes, the system has probably assisted the company in being able to move to a more functionalised form of management because to a large extent the system is in many instances providing the linkages that previously were human, a lot of which required the local overall management. So without the system it would be more difficult to effectively operate on a strictly functional basis. We will be setting up service level agreements and the system will allow us to better monitor and manage the performance against those service level agreements, but it won't be as a result of the system that people's work will change it will be as a result of the different organisation and management structures they will have.

Q: Has CSS caused any unforeseen problems?

I: We have had some problems with what you might call the technical staff. The computing person cannot be expected always to know the operational significance of either the problem or the solution. The might think they've got the solution. The nominated expert within the line management function, inevitably with day to day involvement gets more of a computing hat on than an operational hat on, and you can have a situation where major changes or problems are in without the management being aware. An excellent example of that. We have a resource allocation sub-system, if my people are taking an order from a customer, in order to be able to determine which day of the week the appointment can be made they can go into appointment plan which is on a separate computer, see when our engineering resource is available, offer the appointment and an approximate time. We had that running, running successfully in the Newcastle sales office and paper systems working in Middlesborough and Sunderland. We decided that it was a very useful tool so we extended to Middlesborough and subsequently extended to Sunderland which is the smallest of the three sales offices. What happened was that the addition of the Sunderland terminals on the system overloaded the system which meant it started to fall over consistently. This was flagged up as a problem and what in practice was put in place, and was only in place for an hour and a half, was that my people were being told via my liaison officers only to log onto the system when a customer came on and gave an order that required access to the system. Now if you think about that. If you've got the customer on-line, you want to give him an appointment, you've then got to log on, access the system, and log off and you know how long that takes. Yet I could see the logic of it from a computing viewpoint, "yes that will reduce you overloading the system". What happened was that I told my people in Sunderland to stop using it and I brought the load level down to allow Middlesborough and Newcastle to operate effectively until the system was enhanced to allow for the Sunderland office to be added back in. But it's the sort of change that senior managers have got to be aware of in any management organisation you've got these outside dependencies. What makes it perhaps more difficult is not having the computing background and having to accept on face value. Statements of other disciplines that you deal with you might well question. If I had a shall we say discussion, argument, negotiation with an engineering colleague or a billing colleague or accountant whatever then I'm happy to argue with common-sense knowledge. If a computing person says to me it can't be done then all I can do is ask somebody else who's got that same level because I ain't got the knowledge of the system to be able to challenge myself. I think what's more and more important for the future is to get computing. For functional line managers to be far more specific in defining what they want from the system and to be ruthless in demanding the format, the output, the content as they want it rather than taking what is given by the computing experts.

Q: So, do you think that there are potential pitfalls in relying on computers?

I: There's two things really, two words of warning. First, the manager who gets a terminal on his desk and therefore converts himself from being a manager to a clerical assistant, doing bar charts and spread sheets etc. That is not what managers are paid for. They've got people down there who have got the competence and can probably do it quicker and better. Second, the over-use or mis-use of machines. I worked in Northern Ireland about 10 year ago, there were two emergency

situations during the time I was working there and I happened to get lumbered with representing BT at the sort of Stormont emergency committee. In each instance there were power strikes and one of the bits of information that needed to be reported on a daily basis was the fuel reserves that BT had in Northern Ireland in terms of power cuts and the exchanges. On the second occasion I asked the appropriate person in Northern Ireland before I went to the meeting "are the arrangements the same as last time in terms of the time by which we would tell Stormont or the emergency committee what our fuel reserve system is?" "No, no mate" he said, "it'll be 2 o'clock in the afternoon", I said "come on we used to supply it up to 3 year ago at 10 o'clock in the morning". "Oh no" he said "we put it on the computer now and it takes a long time to run and we can't guarantee it being available at 10 o'clock". I said "how many storage depots do we have in Northern Ireland?" major storage depots not little ones, "8", How long does it take to make 8 phone calls? I said what we're do is we'll get 8 dipstick readings at 7.30, they're phoned in by 8 o'clock to one clerical assistant, that clerical assistant adds up the total that clerical assistant has the average usage assuming the zero power situation you divide A by B you get the number of working days, you ring Stormont and you tell them.