

Structure of A&A Computers Ltd.'s Current Repair and Support Activities

A&A Computers Ltd. offers technical services with a transparent pricing policy and aim at a turn-around repair time of 48 hours.

A&A Computers Ltd. provides its customers with support at the **Repair Workshop** at its premises in Arusha, **On-site Support** and a free **Help Desk** service. Should a repair job need a part, A&A Computers Ltd. stock all standard computer parts such as main boards, hard disk and floppy disk drives, power supplies and I/O boards. Other parts can generally be available in three weeks.

A&A Computers Ltd. also provides its customers with an on-site **Periodical Preventive Maintenance** service.

Technical Services

Support at the Repair Workshop

Repairs Procedure

1. Intake

The customer comes with the item to be repaired directly to the A&A Computers Ltd. premises or reports the problem through e-mail first and then brings the item in. The **Service Centre** attendant receives the item and fills in the job card, which contains information needed for the repair of the item, such as the 'Items' themselves, the 'Client' name, the customer's 'Phone' number or 'Email' address, the 'Date in', that is the intake date of the item, and the 'Symptoms / Tasks' to be accomplished on the item –that is, what the problem is and what the customer thinks it needs to be done. If the customer cannot tell what the problem is or what the symptoms are, the repair cannot begin until this information is received, therefore the item cannot be accepted. Also, if the customer cannot give a contact telephone number or e-mail address, the item cannot be accepted either, since there would be no possibility to contact the customer back once the item has been repaired.

Once all the information needed is gathered, an exact copy of the job card is entered in the '**Repairs**' Database by the **Service Centre** attendant, with the status of 'Received'.

The **Service Centre** attendant puts a sticker on the item to be repaired, which shows the job card number, the date of the item intake, the name of the customer and a short description of the problem, then sends the item to a technician at the **Workshop**. No token is completed or used.

2. Repair

The 'Status' field of the relevant job card in the '**Repairs**' Database is updated from 'Received' to 'Under Repair' and the technician's initials are entered in the

'Techn.' field. The job card is updated by the technician who is working on the job card's item. From this point on the technician's task is to analyze and fix the item's problem, whose solution is sought for also on the Internet. Both preloaded and non-preloaded hardware and software are supported.

When the item is repaired, its status is updated to 'Ready' in the '**Repairs**' **Database** and a 'report' –describing what the root cause was and how the item has been fixed-, costs and the repair date are entered in the job card.

If the item is beyond repair, for economic reasons or because the part needed is unavailable or the cause of the problem is unknown and therefore the problem cannot be fixed, the customer is asked to pay only diagnostic charges. In that case the job card status changes to '**Beyond Economic Repair**' or '**Beyond Repair – part unavailable**' or '**Beyond Repair – cause unknown**'.

3. **Parts**

If parts are needed for the repair, they are entered into the '**Repairs**' **Database** and the status of the job card changes from '**Under Repair**' to '**Waiting for Spare**'. If the parts are available from the store, the technician completes a store request card with reference to the job card number and handles it over to the management assistant, who has to approve the request and then send the card to the store. If the parts are not available in the store, their specifications are forwarded to the **Workshop** manager who adds them to a purchase request and they are ordered from the shop. The request card will be kept at the store until the part arrives and at that point will be handled over back to the management assistant.

4. **Post-Testing**

Once the item is 'Ready', it is forwarded to the **Quality Assurance Centre** for post-testing. After passing the post-test, the **Service Centre** attendant is requested to contact the customer.

5. **Contacting the Customer**

The **Service Centre** attendant regularly scans the '**Repairs**' **Database** for '**Uncollected**' and '**Waiting for spare**' items, by using respectively the '**Uncollected**' and '**Waiting for spare**' views. The '**Uncollected**' items include both the items that have been repaired and therefore are 'Ready', and also the ones that are '**Beyond Economic Repair**' or '**Beyond Repair – part unavailable**' or '**Beyond Repair – cause unknown**'. The '**Waiting for spare**' items are the ones that need a replacement part in order to be fixed, and the customers need to be called as they are entitled to decide how they prefer to get the part.

The **Service Centre** attendant contacts the customer by phone or by e-mail. If the customer does not collect a repaired item within three months, the item is discarded, and in the '**Repairs**' **Database** its status changes to '**Discarded**' if the repair was not paid, and to '**Paid – Uncollected**', if instead it has been paid.

6. **Collecting the Item**

The customer come to collect the item and pays the bill. The status of the item in the **Repairs Database** changes from 'Ready' to '**Collected**'.

On-site Support / Engineer Call-Out

Repairs Procedure

1. Appointment

The customer calls or writes an e-mail requesting on-site support. Depending on the urgency of the problem, a technician is sent on-site immediately or an appointment is made. ***Engineer Call-Out*** support is usually provided for networking issues that needs to be analyzed at the LAN site, for local computer's problems that needs to be checked in their on-site environment or if the customer insists on having an engineer over and is not willing to bring the item to the ***Service Centre***.

2. Visit

Two vehicles are available for the on-site visits, but mostly they are not used. Once the visit is finished, the technician completes a service report, in which it is described root causes and fixes to the problem.

3. Billing

The copy of the service report is handled over to the technical director, who forwards it to the ***Service Centre*** attendant, who enters it in the '***Repairs***' ***Database***.

Help Desk / Technical Support on the Phone

A&A Computers Ltd. customers also avail of a technical support on the phone.

1. Software and Hardware Help Desk

For any software and hardware issues they have to dial 027-2508306 and ask for extension 15, or write to pchelp@arusha.co.tz.
Software and hardware assistance by phone is free of charge.

2. For Network and Internet Help Desk

For network and Internet issues they need to call 027-2508306 and ask for extension 17, or write to lantech@arusha.co.tz

On-Site Periodical Preventive Maintenance

1. Agreement

Periodical Preventive Maintenance (PPM) can avoid many common computer faults. The A&A Computers Ltd. technicians perform ***Periodical Preventive Maintenance*** on-site.

For this service, a *Periodical Preventive Maintenance agreement* is signed by both the customer and A&A Computers Ltd. The *PPM agreement* sets prices and features of the service, namely how much the customer is charged for each hardware and software maintenance operation and in details what kind of hardware and software maintenance the technician performs on-site. For details on the *PPM agreement*, a copy of it can be downloaded on-line from the A&A Computers Ltd. web site, at <http://www.arusha.co.tz/ppm.pdf>.

2. Appointment

The customer calls or writes an e-mail to request on-site maintenance and to make an appointment. The customer has to request this service on a specific date and at least two weeks in advance.

3. Visit

Once the visit is finished, the technician completes a maintenance report, called '*Maintenance Job Sheet*', in which it is described what kind of maintenance the technician has performed in the customer's machine. A copy of the '*Maintenance Job Sheet*' is also available on-line as it is included in the *Periodical Preventive Maintenance* agreement.

4. Billing

The copy of the maintenance report is handled over to the technical director, who forwards it to the *Service Centre* attendant, who enters it in the '*Repairs Database*'.

A&A Computers Ltd. On-line Tools

The '*Repairs*' Database

As above mentioned, the '*Repairs Database*' is the primary tool used by the *Service Centre* and the *Repair Workshop* staff to record all the new repair job cards and update the existing ones. Once a repair job is completed and the customer comes to collect the repaired item, a hard copy of a repair job card entered in the '*Repairs Database*' is used as a receipt for the customer who availed of the service, therefore the importance of filling in all the '*Repairs Database*' fields with all the relevant information regarding the repair performed.

Here is an example of how a job card looks like in the '*Repairs Database*':

- The ‘*Symptoms / Tasks*’ fields, which describe the problem for each item listed and what the customer believes it needs to be done;
- The ‘*Warranty Claim / OK*’ field, which highlights if the customer is entitled to service under warranty.

Note: All the above fields have to be filled in by the *Service Centre* attendant before sending the item to a technician at the *Repair Workshop*.

- The ‘*Status*’ field, which shows the current status of the item. This field can be filled in only with the following options, as also shown below:



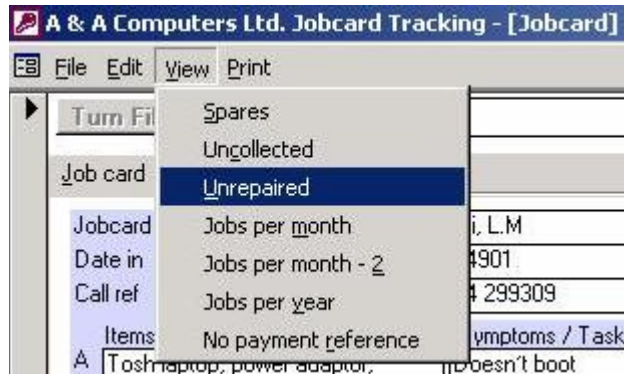
- ‘*Received*’ - when the item has been just brought in;
 - ‘*Under Repair*’ – when the item is being repaired;
 - ‘*Waiting For Spare*’ – when the item needs a part in order to be repaired;
 - ‘*Ready*’ – when the item is repaired;
 - ‘*Collected*’ – when the repaired item has been collected;
 - ‘*Beyond Economic Repair*’ – when the item cannot be repaired due to high service and parts costs;
 - ‘*Beyond Repair – Part Unavailable*’ – when the part needed in order to fix the item is not available;
 - ‘*Beyond Repair – Cause Unknown*’ – when the root cause of the item’s problem is unknown;
 - ‘*Discarded*’ – when the item has been discarded as it has not been collected after three months that has been repaired;
 - ‘*Paid – Uncollected*’ – when the repair service has been paid but the item has not been collected.
- The field for the ‘*date out*’ (related to the ‘*Status*’ field), which shows the date when the item was finally fixed and was ‘*Ready*’ for collection;
 - The ‘*Techn.*’ field, which shows the initials of the technician who has worked on fixing the item;
 - The ‘*Report*’ field, which describes in details what was done to repair the item, in other words the resolution to the problem.

Note: All the above fields have to be filled in by the technician who works on the item at the **Repair Workshop** until the item itself is repaired.

- The '*Charges*' fields, which show the costs of the repair service and it is used as the receipt for the customer.

Database Views

By clicking on the '*View*' menu, it is possible to sort the job cards according to the following views, as shown below:



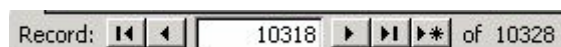
- '*Spares*': it shows a list of the items waiting for a replacement part in order to be fixed;
- '*Uncollected*': it shows a list of all the items that are repaired, whose status is '*Ready*' or '*Beyond Economic Repair*' or '*Beyond Repair – part unavailable*' or '*Beyond Repair – cause unknown*', but have not been collected yet;
- '*Unrepaired*': it shows a list of all the items that have not been repaired yet, and whose status is either '*Received*' or '*Under Repair*';
- '*Jobs per month*': it shows a chart of the number of job cards created per month;
- '*Jobs per month – 2*': the second part as the same chart as above;
- '*Jobs per year*': it shows the number of job card created per year;
- '*No payment reference*': it shows a list of all the items that are '*Ready*' but have not been paid for their repair.

Search Options

Beside the above views, it is possible to sort the '**Repairs**' Database through some other search facilities available by using any job card.

From the job card window, it is possible to:

- Search for a specific job card, knowing the job card number and entering it in the '*Record*' field at the left hand bottom of the job card, as shown below;



- Search for all the job cards created for a specific customer, by entering the customer's name in the 'Turn Filter ON' field and clicking on the 'Turn Filter ON' button, as shown below.

A screenshot of a web form. On the left, there is a button with a right-pointing arrow and the text "Turn Filter ON". To the right of the button is a rectangular text input field that is currently empty. The entire form is enclosed in a thin black border.

A&A Computers Ltd. Web Site

Browsing the A&A Computers Ltd. web site at <http://www.arusha.co.tz/>, the A&A Computers Ltd. customers can avail of several services, such as –as mentioned above– downloading a copy of the *Periodical Preventive Maintenance agreement*, checking the *Repair Status* of their items, submitting a *Warranty Request Form* on-line.

Repair Status

A&A Computers Ltd. customers can check the repair status of their own item on-line, on the A&A Computers Ltd. Customer Care web page, at <http://www.arusha.co.tz/customer-care.htm#Repair%20Status> or <http://www.arusha.co.tz/customer-care.htm#Jobcard-status>. This web page is updated twice a day by the technical director or the *Workshop* manager and its information is directly retrieved from the '*Repairs' Database*'.

In the web page the customers can see two tables: the "*Workshop: items waiting for spares*", and the "*Workshop: items waiting for spares*" table, both shown below.

**Workshop:
items to be collected**

Last updated on
15/04/2005, at 08:12 hrs.

Name	Job card	Status
A&K Tours	10258[A]	Ready
Adra	9795 [A]	Ready
AGS	9370 [A]	BR-part [C] Read
Amazing Tanzania	10215[A]	Ready
AON	10150[A]	BR-part
Arusha Times	10233[A]	Ready
Bill Mrema	10234[A]	Ready
Bucky	10282[A]	Ready
CEDHA	7684 [A]	BR-unkn
Dekker Bruins - Kili	9948 [A]	Ready

Ready = Repaired successfully; BR-econ = Beyond economic repair; BR-part = We can't source required part;
BR-unkn = We are unable to repair it

**Workshop:
items waiting for spares**

Last updated on
15/04/2005, at 08:12 hrs.

Name	Job card	Spares
DED-Mbulu	9867	1 Fuser Unit HPLJ 1300
ELCT	9953	
Hall Peter	9974	1 Transistor No: K2996
Heifer Project International	7438	1 power s # 24389001
Institute of Accountancy Arush	8804	1 sample hub
Mt. Meru Flowers	9843	
Musa	9466	
Nomad Safari Guides	9720	
Plummer	8220	
Tanzania Postal Bank	9987	1 Transistor 47N60 C

Each table contains the following fields:

- The '*Last updated on*' field, which contains the date and the time of the last time the table was updated;
- The '*Name*' field, which shows the name of the company that owns the item;
- The '*Job card*' field, which shows the job card number associated to the item;
- The '*Status*' field, which shows the current status of the item (only in the "**Workshop: items to be collected**" table) or the '*Spares*' field, which shows part description and number (only in the "**Workshop: items waiting for spares**" table);
- A '*Legend*' which explains the meaning of each status.

In the first table, called "**Workshop: items to be collected**", the customers can see only the items with the following status:

- The '*Ready*' (= Repaired successfully) but '*Uncollected*' items;
- The '*BR-econ*' (= Beyond economic repair) but '*Uncollected*' items;
- The '*BR-part*' (= We can't source required part) but '*Uncollected*' items;

- The 'BR-unkn' (= We are unable to repair it) but 'Uncollected' items;
- The 'Waiting for Spares' items.

In the second table, called “**Workshop: items waiting for spares**”, they can see only the items that are under repair but need a part in order to be fixed.

Warranty Claims

A&A Computers Ltd. gives their customers a three months' warranty on labour and parts. A&A Computers Ltd. also extends a limited warranty on factory defects, on a carry-in basis. The customers have to submit proof of purchase and complete a **warranty request form**, available at the **Service Centre** and on-line, on the A&A Computers Ltd. web site, at <http://www.arusha.co.tz/warranty-request.htm>.

A&A Computers Ltd. Premises & Operations

Service Centre, Repair Workshop & Quality Assurance Centre

As described above, all the repairs procedure -from intake and repair to final testing and collection- takes place in the A&A Computers Ltd. **Service Centre, Repair Workshop** and **Quality Assurance Centre**: the intake starts at the **Service Centre**, the repair itself takes place at the **Repair Workshop** and the post-testing and collections occur at the **Quality Assurance Centre**.

In the **Repair Workshop** each technician has his own desk. Underneath the desks and on the shelves on the walls, all the necessary tools -such as screw drivers, CD's, floppy disks etc.- and parts, software CD's and floppies with drivers and so on are stored.

The technicians avail of two client computers that they can use for testing and training purposes: they can use them to surf the Internet in order to search for solutions to some unknown problems and also to study in the periods that they are not busy with the repairs. They also avail of a third client computer where they have access to the '**Repairs Database**' -where each technician updates the job cards they work with- and to the mail inbox of the workshop@arusha.co.tz e-mail account.

Outside the door of the **Workshop**, underneath the stairs that connect the **Workshop** downstairs to the **Service Centre** and **Quality Assurance Centre** upstairs, the 'Ready' computers, that have not yet been collected, are stored.

Time Scheduling & Meetings

All the technical staff at A&A Computers Ltd. works according the following schedule:

- From 8:00 am to 5:00 pm from Monday to Friday;
- From 8:00 am to 12:30 pm on Saturdays.

During the working day there is no strict schedule, and each technician takes their lunch break when lunch is ready and their breaks whenever the **Repair Workshop** is not busy with repairs to be completed.

Currently there are no scheduled meetings for the staff to attend. There used to be a weekly meeting that used to take place on Mondays.

Proposal of Changes With a View to Improve Quality

Technical Services

Support at the Repair Workshop

Repairs Procedure

1. Intake

a. There should be an extensive pre-testing phase in order to improve customer satisfaction

Once the item is brought in and its intake accepted, there should be a technician in duty of a pre-testing phase. The customer should be brought at the ***Quality Assurance Centre*** and there take the necessary time to explain and show the problem to the technician. Once the technician has a clear understanding of what the problem is, he/she can give the customer a *more appropriate estimation time* on how long the repair will take. A real estimated time on the repair jobs will increase customer satisfaction.

b. There has to be a better management of the job cards in order to reduce an unfair distribution of work

Once a job card is created, there should be a technician with the specific task of assigning the job cards to the technician. The technician for that particular job card has to be chosen according to specific criteria: if in the '***Repairs***' ***Database*** there were a view by technician, it would be possible to assign the new job card to the technician whose 'assigned time' has an available slot for a new job card, always according to their skills (i.e., the problem is hardware or software related). Without a correct management of the job cards, there is the risk of having an unfair distribution of work.

2. Repair

a. The job card has to be updated while the item is 'Under Repair'

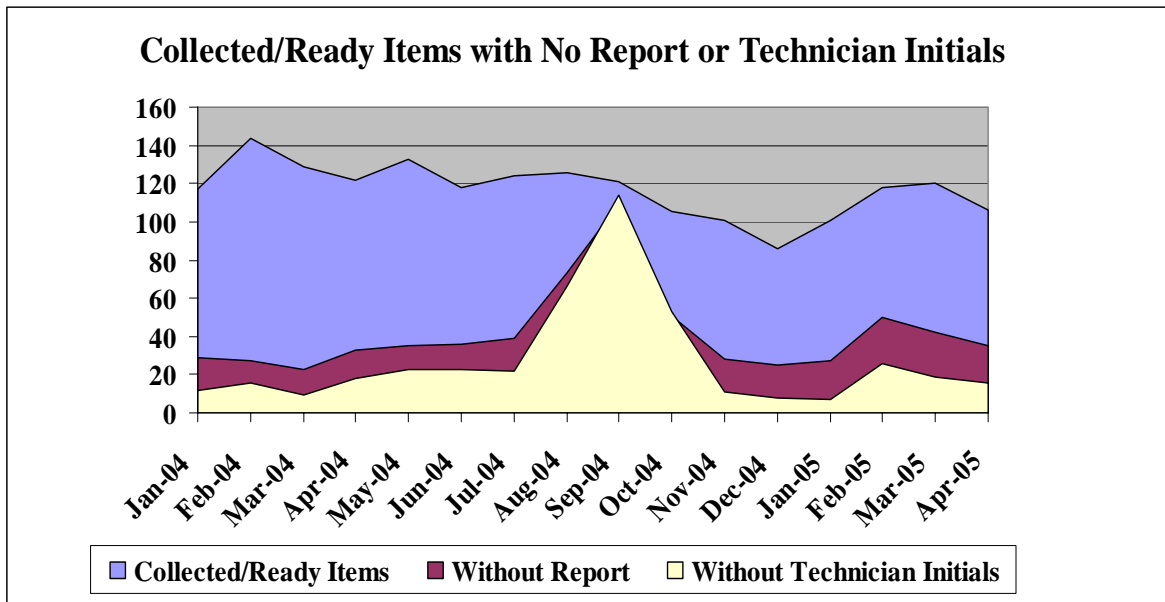
The relevant job card in the '***Repairs***' ***Database*** is currently updated only when the item is repaired and its status is '*Ready*' (as a matter of fact, during the actual repair only the '*Status*' field of the job card is updated). That final update is made in the '*Report*' field, where the technician who worked on the item enters the root causes and what he did to fix the item,

and in the 'Techn.' (technician's initials) field. The 'Report' field should be updated every time the item is worked on and at least once a day, so that the customers would know what has been done on the item in case they called for an update on the repair status.

b. 'Report' and 'Techn.' fields have to be always entered

For sake of transparency and customer satisfaction, the *technician's initials* have to be entered and the *report* has to be filled in, even with advice to the customer on how to prevent the same problem from occurring again, if applicable. Currently, many times, the 'Report' field is not currently updated even after the item is fixed, nor even the *technician's initials* are entered, and many job cards for 'Ready' or 'Collected' items just shows an empty 'Report' field and no *technician's name*.

The following chart shows this trend starting from January 2004.



c. 'Status' field should never show 'Beyond Repair – Cause Unknown'

Currently, if the item is beyond repair because the cause of the problem is unknown and therefore the problem cannot be fixed, the job card status shows 'Beyond Repair – Cause Unknown'. Such a status cannot be accepted as valid, especially by the customers, since they expect that any problem can be diagnosed correctly by the **Repair Workshop** staff and the incapacity to repair an item should only depend on the unavailability of a part or on the high costs involved in fixing it, not on the lack of proper diagnostic. Such items should be eventually marked only with a status of 'Beyond Economic Repair' or 'Beyond Repair – Part Unavailable'.

d. The job cards should never be updated with 'Attached'

Sometimes the customer brings the item in with a piece of paper attached on the computer itself, where they describe all the issues that the computer is having. In those cases, the **Service Centre** attendant creates the job card for the item and in the 'Symptoms / Tasks' fields just types 'Attached'. Instead, the relevant job card in the '**Repairs**' **Database** should always have the 'Symptoms / Tasks' fields updated with the full problem reported by the customer.

e. It is necessary to improve the communication between the customers and the technicians

One of the main reasons of customer satisfaction is communication and interpersonal skills of who is providing the customer service. Explaining the customer more about the problem, such as the causes of the issue, how to avoid it next time, what was done to fix it and so on would already improve such communication. Perhaps adding both an *extensive pre-testing and post-testing phase*, when the technician could spend some time with the customer, would be another way to improve it, as long as the technician is willing not to use a very technical language but talks the 'same language' as the customer, in order to achieve a good level of reciprocal understanding.

3. Post-Testing

The Quality Assurance Centre has to provide a more accurate post-testing

The same as for the pre-testing, once the item is repaired, there should be also a technician in duty of a *post-testing phase*. The technician should bring the customer to the **Quality Assurance Centre** and there take the necessary time to explain and show to him/her what the problem was, how it was fixed, how to avoid it again, test the item in front of the customer and answers all the questions and doubts that the customer might have. Once the customer is satisfied with the repair work done and all his/her questions answered, he/she can collect the item and pay. Communication with the customers will definitely increase their satisfaction.

4. Contacting the Customer

Job cards need to be updated every time the customer is contacted

When the item is uncollected and the customer is contacted, by phone or by e-mail, there is no update entered in the job card stating that the customer was contacted. Instead, the relevant job card needs to be updated every time the customer is contacted.

5. Collecting the Item

Collected items should be demonstrated to the customer in the Quality Assurance Centre

As stated above, *post-testing* should be included in the collection phase and the equipment should be extensively tested together with the customer

before returning it. Only once the customers agree that the item works well, they can collect it and pay the bill.

On-site Support / Engineer Call-Out

Repairs Procedure

Appointment

There should be a better management of the engineer calls-out in order to avoid an unfair distribution of work

Once a customer takes the appointment for an engineer call-out, there should be a person with the specific task of assigning the on-site support job to a specific technician. The same as for the repairs at the ***Workshop***, the technician for that particular on-site job has to be chosen according to specific criteria: if in the '***Repairs***' ***Database*** there were a view by technician, it would be possible to assign the new on-site job to the technician whose 'assigned time' has an available slot for that, always according to their skills (i.e., the problem is hardware or software related). Without a correct management of the on-site assignments, there is the risk of having an unfair distribution of work.

Technical Support on the Phone

1. Support on the phone should be free of charge only if the customer has warranty

Help Desk support should be free of charge only if the customer's computer is in warranty, since sometimes, depending on the problem reported by the customer, it might take the technician quite a long time to give instructions to the customers on the phone and guide them in applying the instructions given.

2. Job cards should be created also for Help Desk queries

Even though the ***Help Desk*** service is free of charge, a job card should still be created in the '***Repairs***' ***Database***, for further reference's reasons, in case the customer calls again for the same problem in the future.

3. Help Desk support work should be distributed more fairly

The ***Help Desk*** support as it currently is creates an unfair distribution of work as most of the times the same technician answers the phone, simply because the phone is closer to his desk. Perhaps more use of common sense, respect for each other's work and a stronger sense of fairness would help the technicians to answer in turn whenever the phone rings.

4. Greeting on the phone needs to be implemented

There is a need to implement both an initial and final greeting when a *Help Desk* call is answered. Currently, the technicians answering the call greet the customer simply with “*Hello*”. When a call is answered, the customers need to be greeted politely, assured about ‘*who in which company*’ they are talking to and also that they are being offered support. When the call is over, the customer needs to be greeted politely again and feel welcome to call again.

Therefore, the initial greeting should sound like, “*Good morning/afternoon, A&A Computers, Paul speaking, how can I help you?*”

The final greeting should sound like, “*Have a nice day and thank you for calling A&A Computers*”.

On-Site Periodical Preventive Maintenance

1. Agreement

The operating systems should be standard and service packs and security patches should be updated

According to the *Periodical Preventive Maintenance agreement*, there is no signed deal for applying service packs and security patches to the operating systems, perhaps because the operating systems installed on many of the customers’ machines are not genuine and therefore no service pack or security patch can be applied. As the current operating systems are easily open to security breaches and viruses, which can be prevented by having the operating system updated with all the necessary service packs and security patches, perhaps it would be advisable to reload the customer’s machine that is not standard with a genuine version of the operating system, so that service packs and security patches can be applied and therefore many viruses and security breaches prevented.

2. Appointment

There should be a better management of the engineer maintenance calls-out in order to avoid an unfair distribution of work

Again, in order to avoid an unfair distribution of work, once a customer takes the appointment for a *PPM*, there should be a person with the specific task of assigning that job to a specific technician. Again, that technician should be chosen according to specific criteria, as specified above.

A&A Computers Ltd. On-line Tools

The ‘Repairs’ Database

The job cards have to be updated with more accurate information

As stated many times above, the job cards in the ‘*Repairs*’ *Database* need to be update with more accurate information and more often, at least once a day or

preferably every time an item is worked on, so the customer will always be able to be informed on the repair status.

Database Fields

More fields should be added in the job card of the 'Repairs' Database

The following fields should be added in the job card of the **'Repairs' Database**:

- The **'Manufacturer'** field, which shows the manufacturer of the machine that is being repaired;
- The **'Machine Type/Model'** and **'s/n'** (serial number) fields, which show the specifications of the machine;
- The **'Operating System'** and, as appropriate, **'Service Pack version'** or **'BIOS level'** fields, which describe what is the operating system of the machine, if it is standard or not, and what is its BIOS or SP level;
- The **'Purchase Date'** field, if it is a computer purchased through A&A Computers Ltd., to automatically calculate the warranty entitlement. Also, once the **'Manufacturer'**, **'Type/Mod.'** and **'s/n'** (serial number) fields are entered, if the system tracks that this is a machine sold by A&A Computers Ltd., this field should be fed automatically;
- The **'Warranty (Y/N)'** and **'Warranty Exp. Date'** fields, which show if the customer is entitled to receive service under warranty and when this entitlement will end (this field will be fed automatically when the **'Purchase Date'** field is filled in, if the computer was purchased through A&A Computers Ltd.);
- The **'Backup (Y/N)'** field, which specifies if the customer agrees on an eventual back-up, format and reload of the system;
- The **'Password'** field, which shows the Power-on or Windows password of the machine to be repaired;
- The **'Severity'** field, which describes the priority of a repair job. The severities used to feed this field can be four, as follows:
 - ✚ **'Severity 1'** – for items that need to be repaired immediately or maximum within the next 2 hours;
 - ✚ **'Severity 2'** – for items that can be fixed in 24/48 hours;
 - ✚ **'Severity 3'** – for items that can be fixed in 48/72 hours;
 - ✚ **'Severity 4'** – for items that can be fixed up to 1 week time;
- The **'Target Date'** field, which shows the date and time by when the item has to be repaired. This field will be fed automatically when the **'Severity'** field is filled in. If the item is not yet fixed by the supposed target date, this field has to become red, as to highlight that the item is **'OoT' (Out of Target)**.

Note: The *severity* of an item and consequent *target date* has to be decided by the person who is in duty of assigning the job cards or preferably by the technician who will undertake the *pre-testing* with the customer.

Database Views

The technicians views should be added in the 'View' menu of the 'Repairs' Database

By clicking on the 'View' menu, it should be possible to sort the job cards according to the technician who has been assigned to work on them, and in order of *severity* and *target date*. Those views would be a direct consequence of the 'job-to-technician' assignment that would take place once the item has been accepted for intake and the new job card entered in the '**Repairs' Database**.

Once those views are created, ideally as a first morning task, each technician should open the view by the jobs assigned to their own name and have a complete view of the unrepaired jobs that need their attention according to their *severity* and *target date*.

That would improve the time spent in repairing items that should be repaired much sooner than in reality they are. As an example, the following table shows the current '*Unrepaired*' jobs, at date April 20th 2005. Some of these jobs are quite old and, because of the lack of information entered in the relevant job card in the '**Repairs' Database**, it is not clear why they have not been fixed yet.

Current Status of Unrepaired Jobs

Job Card no.	Intake Date	Item	Status	Report Info
8579	16/02/2004	UPS not charging	Under Repair	No update
9242	24/11/2004	Printer problem	Under Repair	Waiting for the customer to bring their pc in. Not specified if the customer was contacted.
9795	03/12/2004	Printer problem	Under Repair	No update
9913	22/02/2005	Data backup	Under Repair	Data to be copied on CD. No CD-RW in stock. Not specified if the customer was informed.
10088	26/02/2005	Monitor blinking	Under Repair	No update
10125	04/03/2005	Toner refill	Received	No update
10240	06/04/2005	UPS needs replacement battery	Under Repair	No update
10276	12/04/2005	Printer problem	Under Repair	No update
10280	12/04/2005	Network card to be installed	Received	No update
10296	13/04/2005	Very slow PC	Received	No update
10309	18/04/2005	Monitor diagnostic	Under Repair	No update
10320	18/04/2005	Laptop with drive not reading DVD's	Received	No update
10325	20/04/2005	PC to be formatted and operating system installed	Under Repair	No update
10326	20/04/2005	Applications do not	Received	No update

A&A Computers Ltd. Web Site

Repair Status

1. *The Repair Status web page should also show the 'Received' and 'Under repair' items*

In the *Repair Status* web page all the uncollected items should be shown, not only the 'Ready' or 'Waiting for spare' items, but also the 'Received' and 'Under repair' ones, so that all the customers who have brought an item in can check the status of their repair, although the items have not been repaired yet.

2. *The 'Status' field should never show 'BR-unk' (= We are unable to repair it)*

Again, the status 'BR-unk' (= We are unable to repair it) cannot be accepted as valid, especially by the customers, since they expect that any problem can be diagnosed correctly by the *Repair Workshop* staff and the incapacity to repair an item should only depend on the unavailability of a part or on the high costs involved in fixing it, not on the lack of proper diagnostic. Such items should be eventually marked only with a status of 'BR-econ' (= Beyond economic repair) or 'BR-part' (= We can't source required part).

Warranty Claims

There should be a computerized tracking system that keeps a record of the sold computers at the A&A Computers Ltd. shop

If a computerized tracking system that keeps a record of the sold computers at the A&A Computers Ltd. shop is created, that system could be directly linked to the '*Repairs*' Database in order to automatically feed the three new suggested fields of the on-line job card, that are 'Warranty (Y/N)', 'Warranty Exp. Date' and 'Purchase Date', that would be retrieved automatically once the 'Manufacturer', 'Type/Mod.' and 's/n' (serial number) fields are entered.

A&A Computers Ltd. Premises & Operations

Service Centre, Repair Workshop & Quality Assurance Centre

1. *The Repair Workshop needs tidying and cleaning in order to have a professional look*

Currently, all the tools, parts, CD's, floppies etc. lay around the *Workshop*, underneath the desks or on the shelves, without any organized pattern. Only if you are familiar with the place and know where to find something, you will find it. Even the uncollected computers are stored without any pattern outside the door of the *Workshop*, underneath the stairs. All the content of the *Workshop* needs a

very good cleaning and tidying, which would make the place look much more professional and taken care of.

2. *The shelves should be organized in a more appropriate way and have tags*

For a start, it would be essential that all the tools, parts etc. would be stored in an organized way on the shelves. For that reason, it is necessary to put proper tags on the shelves and put on them what the actual tag describes there should be. Also, it is not acceptable that some **Workshop** material is stored underneath the desks. This material has to be accommodated on the shelves too. For heavy tools or parts a closed shelf can be perhaps created underneath the stairs.

3. *The Technicians should have a name tag on their own desks and should wear an ID*

In order to improve the professional look and increase the confidence of the customers on the service received, the technicians should have a name tag (with a brief description of their role) stuck above their own desk. They should also wear at all times an ID, which shows their own name and role. That would also improve the communication customers/technicians, as that would make the customers feel more comfortable when they are talking to a technician as they would know who he/she is and what he/she does.

4. *Every technician should have their own pc (for training and testing purposes)*

Currently all the technicians share two computers that they can use for testing and training purposes. Each technician should have their own computer, so that they can use it to surf the Internet in order to search for solutions to some unknown problems whenever they need to do so, without waiting for another colleague to finish, and also to study in the periods when they are not busy with the repairs, again without waiting for someone else to finish using it. It would be also necessary that they had access to the '**Repairs**' **Database** from any of those computers. That would perhaps improve their use of it, as they would be more comfortable in updating their job cards.

5. *Every technician should have their own e-mail account*

Besides the workshop@arusha.co.tz group e-mail account, the technicians should have their own personal e-mail account. That would improve the communication between them and the customers, as the customers would know who is dealing with their problems and who to contact in case of updates.

Time Scheduling & Meetings

1. *The technicians should have a daily schedule aimed to solve the time management issues, as at times the items are not post-tested carefully and the quickest but not best solution is applied*

Currently during the working day there is no strict schedule, and for instance each technician takes their lunch break when lunch is ready and their breaks

whenever the *Repair Workshop* is not busy. If all the technicians had their own schedule, there would not be times where everybody is on a break when perhaps there is work to be do

At the moment, time management is an issue at the Workshop: there is not a proper distribution of the time in the daily tasks; there might be too much 'dead' time, when –although there is work to do- it just lies there while the technician are in a break, until they end up in a rush to finish the work that has been waiting there for, sometimes, hours. Because of the lack in managing the time correctly and because of the consequent rush in finish the pending jobs, most of the times the items are not post-tested carefully and also the quickest but not best solution is applied.

According to the schedule, and as a consequence of the changes made on the '*Repairs*' Database –where the technicians would have a view with the job cards assigned to them according to *severity* and *target date*- the technicians should check their own unrepaired job cards as their first morning duty, and therefore fix the items in order according to their *severity* and *target date*.

2. *There is a need to regularly schedule a weekly meeting*

In order to keep an open communication with the staff and to discuss all the issues that may arise in a working day, there is the need to have at least a weekly meeting with the staff, perhaps on Mondays or Fridays. The meeting agenda can be prepared in advance by asking the employees what are the issues that they would like to discuss during the meeting.

Details on How I Can Help Implement the Proposed Changes

Being a certified IT specialist; having six years experience of technical support in the IBM Technical Support Helpdesk based in Dublin, Ireland, where I have been a product analyst, that is second level support, since September 2000; being a Microsoft Certified and an IBM PC Architecture Certified Professional and therefore having acquired excellent problem solving, communication and interpersonal skills, I believe those skills would give me the ability to take care of the following two proposed changes aimed to improve customer satisfaction:

- 1. *An extensive pre-testing phase to take place at the Quality Assurance Centre in the presence of the customer;***
- 2. *A more accurate post-testing phase to take place at the Quality Assurance Centre, where repaired items would be extensively demonstrated in the presence of the customer before their collection.***

As a second level analyst, I have also had the duty of Acting Team Leader with responsibility on the Italian Team. My extended experience in a highly performing IT customer service environment has helped me acquiring not only the title of IT Service Management certified, but also good leadership and negotiation skills and the ability to learn very quickly and to work efficiently under pressure to deadlines on my own or in a team. I believe that those skills, together again with my good communication and interpersonal skills, will be essential in performing the following seven proposed changes aimed to improve the organization of the daily work and to reduce an unfair distribution of work:

- 1. A proper management of the job cards, namely their assignment to the technicians;*
- 2. A proper management of the engineer calls-out, namely their assignment to the technicians;*
- 3. A proper management of the engineer maintenance calls-out, namely their assignment to the technicians;*
- 4. The assignment of the severity level and consequent target date of the item to be repaired, which have to be decided preferably by the technician who will undertake the pre-testing with the customer;*
- 5. The creation of a daily schedule for the technicians, aimed to solve the time management issues;*
- 6. The scheduling of a weekly meeting and creating of its agenda and minutes;*

As I am also a very creative, motivated and enthusiastic person, I know I have the right skills in helping with the following three proposed changes, aimed to create a work environment with a more professional look:

- 1. The tidying and cleaning of the Repair Workshop;*
- 2. A more appropriate organization of the shelves, which would have descriptive tags;*
- 3. A more appropriate organization of the technicians' desks, which would have name tags, which would also include a brief description of the technician's role.*

Finally, my experience as a teacher, my responsibility in the creation of the technical documentation as a second level analyst, and all the extensive customer care training courses and experience I acquired in the IBM customer service environment, are all skills that I can use to cooperate with the training department staff in the creation of a *Customer Service* training course, aimed to get the technical staff familiar with the proposed changes -once they are put in place-, and to educate them in how to apply those changes

in their daily work, in order to provide a better customer service so that a higher customer satisfaction can be achieved. The following are some points that could be included in the course, points which refer directly to the above-proposed changes:

- 1. *How to correctly update the job cards***
 - a. The job cards have to be updated with more accurate information;***
 - b. The job cards have to be updated while the item is 'Under Repair;'***
 - c. 'Report' and 'Techn.' fields have to be always entered;***
 - d. The job cards should never be updated with 'Attached';***
 - e. The job cards need to be updated every time the customer is contacted.***

- 2. *How to improve the communication between the customers and the technicians***

- 3. *How to provide the customers with a better Help Desk support***
 - a. Job cards should be created also for Help Desk queries;***
 - b. Help Desk support work should be distributed more fairly;***
 - c. How to greet the customer on the phone.***

- 4. *How the 'Repairs' Database has changed in fields and views***
 - a. What are the new fields added in the job card of the 'Repairs' Database***
 - b. Introduction to the technicians views in the 'Repairs' Database***

In brief, I believe my extended experience and knowledge, and my problem-solving, leadership, interpersonal and communication skills would be of great contribution to the achievement of the above-proposed changes.