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**Vision Statement, et al**

# **Hotline Support System**

## **Use Case Report**

**Revision Date:**  
**Version 0.1**

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**Company**

<<Normally there is a Table of Context>>

**Problem Statement**

In Initial email.

**Current Process**

In initial email.

**New Process**

<<define the scope of the new process – Context Diagram>>

The initial email needs to be re-written because of the inconsistency with the verbs and nouns.

**Success Criteria**

<<list in simple statements: Desired Improvement (Must have, Should have, Would like to have) Desired Tool usage (input/output from other programs) Measurements of Success (timing, sizing, security, rules, “user-friendly”)>>

**Stakeholder and Needed**

IT User has an “easier” time to track their Problem Reports

Company get “better” statistics

...

<<Yes, use of not testable verbs “easier” and “better”, because the Stakeholders are defining the success criteria and they are the ones who “perceive” the verbs “easier” and “better”. Of course if numbers can be gathered and checked against so much the better.>>

**Risks**

If the updates are not done ...

<< list in simple statements any risk to doing or not doing the new system>>

**UC List:**

Main Hotline Support Use Case

Support Personnel Use Case

Expert Personnel Use Case

Act on Help Request Use Case

Email Help Request Use Case

Create Help Request Use Case

**Did Not Write**

Request Report Use Case

Create Statistics Report Use Case

Create Generic Report Use Case

Flag Conditions Use Case

Create Flag Condition Report Use Case

Create Email from System Use Case

## **Main Hotline Support Use Case**

**Description:** <<I find this the hardest job of a use case>>

**Actor:**

The Company  
Support Personnel  
Expert Personnel  
Manager  
IT User

**Pre-Condition:** none

**Post-Condition:** The needed action is complete

**Main Path:**

- 1 The use case begins when one of the following is needed:
- 2 At any time: Company needs to identify a company employee as Support Personnel for Hotline Support\_System
  - 2.1 (question: who/position within The Company will have this responsibility - I currently using the person "Manager" . )
  - 2.2 Include: Support Personnel Use Case
- 3 At any time: Company needs to identify company employee as an Expert Personnel for Hotline Support System
  - 3.1 Include: Expert Personnel Use Case
- 4 At any time: Support Personnel needs to be trained or change Hotline Timesheet.
  - 4.1 Include: Support Personnel Use Case
- 5 At any time: Expert Personnel needs to be trained or change Hotline Timesheet.
  - 5.1 Include: Expert Personnel Use Case
- 6 At any time: IT User requests help on a Issue/Problem or Support Personnel has initial request to follow-up on.
  - 6.1 Include: Create Help Request Use Case
- 7 At any time: Support Personnel/Expert Personnel/IT User needs to support a Problem Report.
  - 7.1 Include: Action on Help Request Use Case
- 8 At any time: Manager requests reports from the Hotline Support System
  - 8.1 Statistics Report: (Managers ask for statistics of frequent and time-consuming requests in order to find ways to prevent statistics. Gathering this data would also make it possible to measure how long hotline takes to handle the requests.)
  - 8.2 Aging Report: (The request is sometimes lost because a supporter has started working on it, but becomes ill or goes on vacation before it is finished.)
  - 8.3 Generic Report on any query-able filed: xxx
  - 8.4 Include: Request Report Use Case – did not write, just queries
- 9 At any time: An email is received by System
  - 9.1 Include: Email Help Request Use Case
- 10 At any time: System recognizes a flag condition and reports
  - 10.1 Flag conditions: High priority Problem Reports more than x hours old
  - 10.2 Flag condition: Problem Report has not been worked in a days or is more than x days old
  - 10.3 Flag condition: xxx
  - 10.4 When System recognizes a Flag condition a report is generated
  - 10.5 System sends an email to Manager and respective Owner (question: IT User too)
  - 10.6 Include: Flag Conditions Use Case – did not write, just queries
- 11 End Use Case

**Alternates: / Exceptions: / Includes: / Capabilities:**

## **Support Personnel Use Case**

**Description:** The Company needs to identify company employees as a Support Personnel for the Hotline Support System.

**Actor:**

The Company  
Support Personnel

**Pre-Condition:** The Company has created a Hotline Timesheet.

The Company has created a Support Personnel List.

**Post-Condition:** The needed action is complete

### **Main Path:**

- 1 The use case begins when one of the following is needed
- 2 If Company needs to select Support Personnel for Hotline
  - 2.1 (question: how many firstline Support Personnel are needed online)
  - 2.2 (question: how many secondline Support Personnel are needed online)
  - 2.3 Update Support Personnel List to add, update or remove Support Personnel
  - 2.4 If Support Personnel is added or Support Level is changed, Training is needed
  - 2.5 If Support Personnel is removed, Manager needs to verify Hotline Timesheet is not impacted.
  - 2.6 If Hotline Timesheet is impacted by updates to Support Personnel List , Hotline Timesheet needs to be corrected
- 3 If Support Personnel needs to be trained
  - 3.1 Each Support Personnel, selected to be a Support on the Hotline, must be trained
  - 3.2 Support Personnel need management approval to change Hotline Timesheet, so Hotline support is not impacted.
    - 3.2.1 There must be x number of 1<sup>st</sup> line and x number of 2<sup>nd</sup> line support people available
    - 3.2.2 (question: Availability is 24/7 or only during office hours)
  - 3.3 Each problem/request reported (Problem Report) by IT user must be reported in System
    - 3.3.1 To know the Status and Solution to the problem/request reported
    - 3.3.2 For Statistics and Reports to help support the Hotline System
  - 3.4 Other training
  - 3.5 (question: training difference between 1stline and 2<sup>nd</sup> line support? Or is just experience and approval by Manager)
- 4 If Support Personnel need to change Hotline Timesheet
  - 4.1 Support Personnel checks Hotline Timesheet to make sure their changes don't impact Hotline support (question: define impact)
  - 4.2 Support Personnel needs Manager approval to change Hotline Timesheet (via email)
    - 4.2.1 (question: Is there a Manager position for this or just the Support Personnel being their own Manager or change in Hotline Processes to add a "Manager")
  - 4.3 If Manager accepts change (via email)
    - 4.3.1 Support Personnel changes Hotline Timesheet
  - 4.4 If Manager does NOT accept change (via email)
    - 4.4.1 ??
- 5 End Use Case

**Alternates:**

**Exceptions:**

**Includes:**

**Capabilities:**

## **Expert Personnel Use Case**

**Description:** The Company needs to identify company employee as an Expert Personnel for the Hotline Support System

**Actor:**

The Company  
Expert Personnel

**Pre-Condition:** The Company has created a Hotline Timesheet.

The Company has created a Expert Personnel List.

**Post-Condition:** The needed action is complete

**Main Path:**

- 1 The use case begins when one of the following is needed
- 2 If The Company needs to select Expert Personnel for Hotline
  - 2.1 (question: who/position within The Company will have this responsibility- I currently using the person "Manager" for this in this use case. )
  - 2.2 Update Expert Personnel List to add, update or remove Expert Personnel
  - 2.3 If a Expert Personnel is added or changed, Training is needed
  - 2.4 If a Expert Personnel is removed, the Manager needs to verify Hotline Timesheet is not impacted
  - 2.5 If the Hotline Timesheet is impacted by updates to the Expert Personnel List , the Hotline Timesheet needs to be corrected
- 3 If Expert Personnel needs to be trained
  - 3.1 Each Expert Personnel, selected to be a Support on the Hotline, must be trained
  - 3.2 There is currently no requirements for Expert Personnel to be available for Hotline support; they are "on-call"
  - 3.3 Each problem/request reported (Problem Report) by an IT user must be updated in the Hotline System
    - 3.3.1 To know the Status and Solution to the problem/request reported
    - 3.3.2 For Statistics and Reports to help support the Hotline System
  - 3.4 Other training
  - 3.5 (question: training difference between support and expert support? Or is just experience and approval by Manager)
- 4 End Use Case

**Alternates:**

**Exceptions:**

**Includes:**

**Capabilities:**

## **Act on Help Request Use Case**

Description: A IT User requests view Problem. Support Personnel needs to support a Problem Report. Expert Personnel needs to support a Problem Report.

[[This use case is what I call the CRUD use case. CRUD-Create/Read/Update/Delete per data item. Every data item in a system must have CRUD. Many times this CRUD UC starts as one and then is split into four or more (more if different actors need different uses) depending on actors and readability. Later: Added Email to this usecase and separated Create.]]

### **Actor:**

Support Personnel  
Expert Personnel  
IT User

**Pre-Condition:** The IT User is needing help

**Post-Condition:** The needed action is complete

### **Main Path:**

- 1 The use case begins when one of the Following is needed:
- 2 **UPDATE Problem Report - Support or Expert Personnel only**
  - 2.1 Fields that can be updated:
    - 2.1.1 Description of Problem
    - 2.1.2 Type
    - 2.1.3 Owner
    - 2.1.4 Priority
  - 2.2 If the **Status** field is updated to:
    - 2.2.1 (**question**: how do the Support Personnel know to “raise” the status)
    - 2.2.2 New & Open – can not be selected for update
    - 2.2.3 Expert & Longterm – can be updated
      - 2.2.3.1 Assign Expert personnel to Owner (use Employee DB for **Edb-info**)
      - 2.2.3.2 (**question**: who tracks the Long term requests Support 1<sup>st</sup>/2<sup>nd</sup> or Expert)
    - 2.2.4 Close – can be updated
      - 2.2.4.1 Support Personnel updates Description of Solution
  - 1.1.1 System loses Problem Report; Age-Time stops; **Status is Closed**.
  - 2.3 (**question**: at what point in time must a 1stline turn Problem Report over to 2ndline or Expert)
  - 2.4 (**question**: can any person update any field)
  - 2.5 (**question**: do Support /Expert Personnel they want email too; I believe they use the Hotline system to track the problems)
  - 2.6 System updates Act-on
  - 2.7 System saves Problem Report
  - 2.8 If Owner was updated, System sends email to new Owner
  - 2.9 System emails Problem Report to IT User – to keep the IT User updated
- 3 **Email Problem Report – any company employee**
  - 3.1 System creates and email from the Problem Report
  - 3.2 System sends email to the requestor
- 4 **READ Problem Report - any company employee**
  - 4.1 A Company Employee can use the Ticket list to display Problem Reports (**TL Storyboard**)
  - 4.2 A Company Employee can use the **Request-num** to display a Problem Report (**PR Storyboard**)
- 5 **Delete Problem Report - (**question**-??)**
  - 5.1 (**question**-what would be the rules; what about accidental creation of Problem Report)
- 6 End Use Case

**Alternates: / Exceptions: / Includes: / Capabilities:**

## **Email Help Request Use Case**

**Description:** IT User 's issue/problem/request is email ans entered into the Hotline System

**Actor:**

IT User

**Pre-Condition:** An IT user has an issue/problem/request

**Post-Condition:** A Problem Report is created

### **Main Path:**

- 1 The use case begins when IT User creates an email with an issue/problem/request
- 2 IT User sends the email to System (**question:** what is the email address)
- 3 System receives email
- 4 System queries the Employee DB to fill-in **Edb-info** based on Email address
- 5 System enters "selectable information" from email into Problem Report
- 6 System assigns "all auto filled fields"; **Status to New**.
- 7 System assigns the next available **Request-num**
- 8 System initiates time to start age-time
- 9 System saves Problem Report
- 10 End Use Case

**Alternates:**

**Exceptions:**

**Includes:**

**Capabilities:**

## **Create Help Request Use Case**

**Description:** An IT User 's issue/problem/request become an Open Problem Report.

**Actor:**

Support Personnel

IT User

**Pre-Condition:** An IT user has a issue/problem/request

**Post-Condition:** A Problem Report is created or if it was a simple problem, the Problem Report is closed.

**Main Path:**

- 1 The use case begins when one of the two conditions applies:
  - 1.1 Support Personnel, when available, selects the next "new" Problem Report
    - 1.1.1 Query System as to New Tickets (Status is New)
    - 1.1.2 System presents Ticket List ordered by oldest at top (**TL Storyboard**)
    - 1.1.3 Support Personnel calls IT User to understand/finish Problem Report
    - 1.1.4 Support Personnel enters **Request-num** into System
  - 1.2 IT User reports an issue/problem/request via phone or walkup
    - 1.2.1 Support Personnel selects from System a empty/new Problem Report
    - 1.2.2 System assigns "all auto filled fields"; **Status as New**.
    - 1.2.3 System assigns the next available **Request-num**
    - 1.2.4 System initiates time to start age-time
- 2 System presents Problem Report (**PR Storyboard**)
- 3 System enters Support Personnel Name as Owner (use Employee DB for **Edb-info**)
- 4 Support Personnel questions the IT User and enters or verifies information in Problem Report
  - 4.1 Enter IT User Name : System queries the Employee DB to fill-in **Edb-info**
  - 4.2 Enter Short Subject
- 5 Support Personnel Helps the IT User
- 6 Support Personnel enters other information based on Type
  - 6.1 If **Type is set to Simple**: 1st line able to answer problem during initial contact
    - 6.1.1 Thank the IT User
    - 6.1.2 System closes Problem Report; Age-Time stops; **Status is Closed**.
    - 6.1.3 OPTIONAL: all other fields are optional; This gives the minimum entries for simple problems.
  - 6.2 If **Type is set to 2ndline**: problem can not be answered during initial contact
    - 6.2.1 Assign 2ndline support personnel to Owner (use Employee DB for **Edb-info**)
    - 6.2.2 Enter Description of Problem
    - 6.2.3 Enter time estimate for fix; (based on expertise)
    - 6.2.4 Enter Priority; only if HIGH priority
    - 6.2.5 **Status is Open**.
  - 6.3 If **Type is set to Expert**: Expert help is needed
    - 6.3.1 Assign Expert personnel to Owner (use Employee DB for **Edb-info**)
    - 6.3.2 Enter Description of Problem
    - 6.3.3 Enter time estimate for fix; (based on expertise)
    - 6.3.4 Enter Priority; only if HIGH priority
    - 6.3.5 **Status is Expert**.
  - 6.4 If **Type is set to Longterm**: Equipment needs to be fixed or Software Ordered
    - 6.4.1 Assign Expert personnel to Owner (use Employee DB for **Edb-info**)
    - 6.4.2 Enter Description of Problem
    - 6.4.3 Enter time estimate for fix; (based on expertise)



6.4.4 Enter Priority; only if HIGH priority

6.4.5 Status is Longterm.

7 System updates Act-on

8 System saves Problem Report

9 If Type is Expert or Longterm

9.1 System emails Problem Report to Expert Support Owner

10 (question: If type is just Support Personnel 1<sup>st</sup> & 2<sup>nd</sup>-do they want email too; I believe they use the Hotline system to track the problems)

11 System emails Problem Report to IT User

12 End Use Case

**Alternates: / Exceptions: / Includes: / Capabilities:**

## **Data Dictionary**

### **Actors:**

See Context Diagram; should have a description of each actor here

### **Data Items:**

**Problem Report:** (CRUD UC finished: Create Help Request Use Case, Act on Help Request Use Case, Email help Request Use Case)

**Request-num:** System auto entry, unique id

Creation Date: System auto entry, date first entered into the system

**Status:** New (System auto entry upon creation-Default)/Open/Closed/Expert/Longterm

From problem statement, differences

First-Line = New, owner assigned by system upon creation or from initial selection

Second-line=Open or Expert, owner can be changes by firstline or updated when necessary

**Taken=Open, initial reconition that the owner has accepted**

Parked=Longterm, owner is the Support/Expert overseeing

Reminder=Flag Condition or Report to see issues

(**question:** maybe turn Open to Red when Act-on older than x days)

(... Open to Blue when Time estimate to fix late by x hours/days)

IT User Info: System auto entry, **Edb-info based on IT User Name or email address**

Age-Time: System auto entry, once opened time starts

Owner: is filled in by System when problem report changes from New to Open phase, **Edb-info**

[when changed, **Edb-info** is changed]

**Type:** Longterm(Fix,Parts) /expert needed /simple>Password, App Help) /2ndline

[is filled in by System when problem report changes from New to Open phase]

Short Subject: [Text]few words to describe the problem

(**question:** is this classification/cause or separate field needed)

[is filled in by System when problem report changes from New to Open phase]

Description of Problem: [Text] (not needed if "simple type" use short subject) get info from IT user

Time estimate for fix: (**question:** format) (not needed if "simple type")

[is filled in by System when problem report changes from New to Open phase]

Priority: Normal(default) or High; High means impact to company

[is filled in by System when problem report changes from New to Open phase]

Act-on: System auto entry, contains when last update the report with timestamp

[is filled in by System when problem report changes from New to Open phase]

Description of Solution: [Text]

[is filled in by System when time problem report changes to Close]

LongTerm: (**question:** Is this area needed to support longterm needs)

(**question:** who monitors (owner) of longterm problems; **answer:** Expert only)

Email area: System auto entry, if problem report created by email the whole email is here

[is filled in by System when an initial email creates the Problem Report]

**History: System auto entry, save act-on and owner and status when status changes**

**\*\* this needs to put into the use cases where status changes.**

(**question:** is there a spell check on the text fields)

**Hotline Timesheet:** (CRUD UC finished: need to decide if software or other)

Support Personnel / Expert Personnel Name

Current Month on and off days (**question:** whole days or by hours)

Next Month on and off days

(**question**: if more than two months are needed ...)

(This is currently not a software product it can be a whiteboard with rotating 2 month schedule or on a shared data area to hold a spreadsheet with the same data. Or someone before the month get erased, it is entered into a spreadsheet. For future stats or a future on-line option on the Hotline Support System.)

**Support Personnel List**: (CRUD UC finished: need to decide if software or other)

Support Personnel Name

Phone number

Email

Support Level: 1<sup>st</sup> and/or 2<sup>nd</sup> support position

(This is currently not a software product it can be a whiteboard with info or on a shared data area to hold a spreadsheet with the same data. If the spreadsheet is not shareable is must be printed and posted for Support Personnel general use. And re-printed upon update.)

**Expertise Personnel List**: (CRUD UC finished: need to decide if software or other)

Expert Personnel Name

Phone number

Email

List of Expert knowledge: use [Knowledge List](#)

(**question**: how many experts are need per knowledge item)

(This has to be a spreadsheet to be sortable by Name (first and last) and by Knowledge item ... this will make it easier for Support Personnel to find an expert. If the spreadsheet is not shareable is must be printed (by the different sorts and posted for Support Personnel general use. And re-printed upon update.)

**Knowledge List**: (CRUD UC finished: need to decide if software or other)

List of items that someone can be a expert in.

This list should contain the products that the IT Users use.

This list should also use the words/problems that the IT User would use to describe the problem

**Employee DB**: (CRUD UC finished: outside scope of this system)

**Edb-info**:

Name (query-able by Hotline system)

Email Address (query-able by Hotline system)

Cubical Location

Phone number

(**question**: what is [Edb-info](#))

**Email to Hotline System**: (CRUD UC finished: Email Help Request Use Case)

(**question**: What information is “selectable information”)

Whole email is entered into Email area.

**Email from Hotline System**: (CRUD UC finished: Just “Create” need to be completed)

The Subject Line should be unique so email recipient can readily identify that the email is from the Hotline System. The Subject Line should also contain the [Request-num](#); and if High priority, email “important flag” should be set. The body of the email should contain the whole Problem Report.

**Flag condition Report**: (CRUD UC finished: Just “Create” need to be completed)

The first few lines/rows repeat the Flag Condition

Probably look like the Ticket List Story Board placed in a spreadsheet one Problem Report filed per column; one Problem Report per Row.

**Statistics Report:** (CRUD UC created: Just “Create” need to be completed)

TDB

**Generic Report / Aging Report:** (CRUD UC created: Just “Create” need to be completed)

Default is all non-closed Problem Reports – once in spreadsheet can sort by Owner / Priority / Age

The first few lines/rows repeat the query

Probably look like the Ticket List Story Board placed in a spreadsheet one Problem Report filed per column; one Problem Report per Row.

## **Storyboard / Displays (need a HFE person to help with displays)**

### **PR Storyboard – Problem Report Story Board**

**Fields to be displayed::** All Problem Report Data Dictionary fields

This storyboard presents the Problem Report based on Problem Report Data Dictionary

(**question:** Separate screens depending upon Type, so Support Personnel better knows what to fill-in)

### **TL Storyboard – Ticket List Story Board**

**Fields to be displayed from the Problem Report:**

Request-num; Owner; Priority; Status; Age-Time; Time estimate for fix; Short Description

(**question:** is this all the fields)

This storyboard can display **all** Problem Reports or an initial query (on the following fields) to display a given set:

Request-num; Status; Owner; Age-Time; Priority

(**question:** is this all the fields)

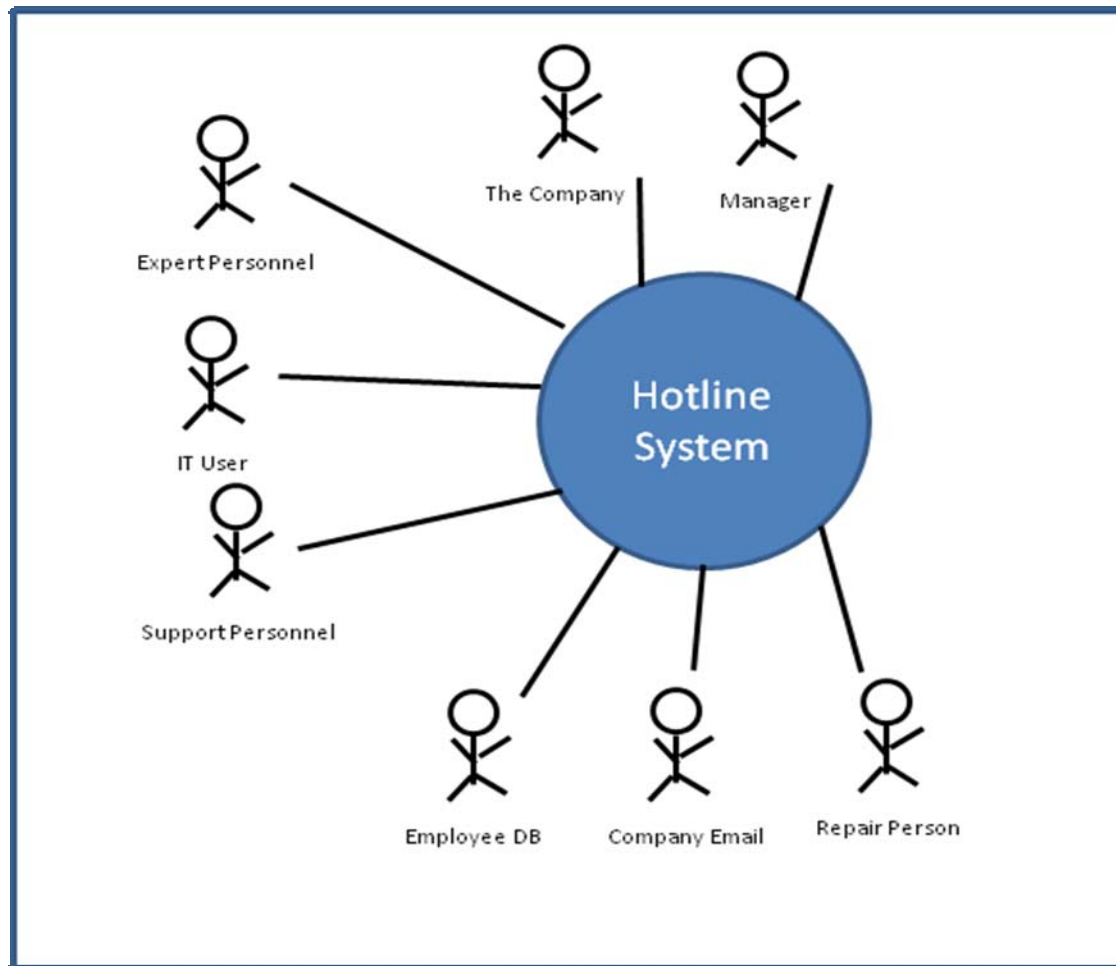
Once the storyboard is presented it can be sorted by (secondary sort on displayed items):

Request-num; Status; Owner; Age-Time; Priority

(**question:** This storyboard will refresh its information every x minutes – so the request does not have to be re-queried – or there is a refresh button.)

Example: A Support Personnel wants to see their Problem Reports ordered by Age; to see what is the oldest to work off.

## Use Case Diagrams



### ISSUES:

1. Need more information: As you can tell from the figure, the system cannot handle national letters (Danish), and it is not intuitive what the various functions do.
2. Need more information: (a) **classify** the case according to the cause of the problem (printer, login, etc.), give it a priority, transfer it to someone else, etc. (b) The present system can be configured to record a problem **cause**, but then the system insists that a cause be recorded initially, although the real cause may not be known until later. In addition somebody must set up a list of possible causes, and this is a difficult task. As a result, causes are not recorded, and statistics are poor. [make an update-able selection list for the cause field] (**question**: Is the “cause” and “classification” the same thing)
3. I did not make a distinction between Firstline and Secondline. I just call them Support Personnel; to me it is just the owner. Because, there is no reason a Secondline can't answer the phone. I did make a Type call 2ndline, but is it really needed?
4. If there is a simple white board scheduling done for the Support Personnel and the Support Personnel are trained to use the whiteboard for scheduling and the Support Personnel are trained to enter Problem Report information in order to gather statistics... what is still needed on the new system.
- 5.