行政院及所屬各機關出國報告
(出國類別：實習)

澳洲實習專線系統維運技術

H6/
c0920056/

公 務 出 國 報 告 提 要

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報告名稱:
　　實習專線系統維運技術

主辦機關:
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出國類別: 實習
出國地區: 澳大利亞
出國期間: 民國 91 年 11 月 18 日-民國 91 年 11 月 23 日
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分類號/目: H6／電信　／
關鍵詞:　專線系統,維運技術

內容摘要:　此次研習依據中華電信股份有限公司九十一年度資本支出派員出國實習計劃，赴澳洲實習「專線系統維運技術」，實習期間自九十一年十一月十七日至二十三日，共計七天，參加於雪梨Clarity公司舉行的Operations Support System(OSS)訓練，提供電信公司管理電信業務受理、電信設備、供裝流程控制、帳單併帳、障礙申報與查修流控等功能。固網開放後，專線業務成為強烈競爭項目，我們亟須建制一套完善作業系統，包含由受理、用交查驗、通繳、印據、核帳、竣工前與障礙維修系統介面，施工進行時之追蹤管制，直至竣工後帳務，維修系統介面。我們原已有一套較完整流程，但是原各系統間介面複雜，無法即時傳送資料，再加上提供的供裝方式日新又新，一但有新的服務與設備引進，各系統又必須花費許多時間修改才能符合需求，有時更因此而造成流程錯誤，平白浪費許多人力與時間在確認資料、更改流程上，本公司亟須改善此問題，以提昇整體競爭力。此行主要目的為觀摩並實際操作OSS系統，了解OSS系統如何運作及比較本公司現有各系統的管理及運作有何不同，以期對改善本公司的供裝流程有所幫助。

本文電子檔已上傳至出國報告資訊網

摘要

　　此次研習依據中華電信股份有限公司九十一年度資本支出派員出國實習計劃，赴澳洲實習「專線系統維運技術」，實習期間自九十一年十一月十七日至二十三日，共計七天，參加於雪梨 Clarity 公司舉行的 Operations Support System(OSS)訓練，提供電信公司管理電信業務受理、電信設備、供裝流程控制、帳單併帳、障礙申報與查修流控等功能。固網開放後，專線業務成為強烈競爭項目，我們亟須建制一套完善作業系統，包含由受理、用交查驗、通繳、印據、核帳、竣工前與障礙維修系統介面，施工進行時之追蹤管制，直至竣工後帳務，維修系統介面。我們原已有一套較完整流程，但是原各系統間介面複雜，無法即時傳送資料，再加上提供的供裝方式日新又新，一但有新的服務與設備引進，各系統又必須花費許多時間修改才能符合需求，有時更因此而造成流程錯誤，平白浪費許多人力與時間在確認資料、更改流程上，本公司亟須改善此問題，以提昇整體競爭力。此行主要目的為觀摩並實際操作 OSS 系統，了解 OSS 系統如何運作及比較本公司現有各系統的管理及運作有何不同，以期對改善本公司的供裝流程有所幫助。

目錄

一、目 的

本公司為強化電信自由化競爭力，在客戶申裝任何服務項目時必須有資訊系統可以受理其申請，並將客戶住址及申請服務之資訊送至網路供裝系統，再依客戶住址提供適當之供裝方法，而且整個作業要立即化，流程要統一化。對於服務中心人員，要有系統可受理、用交查驗、通繳、印據、核帳；對中華電信內部之客戶網路、中繼網路、交換網路資料庫，必須有分派，流程控制之作業機制；對於各現場單位維運人員而言，則必須有派工、取單、竣工回報功能；對於帳務系統，必須有各類電信服務帳單合併等規劃。

固網開放後，專線業務成為強烈競爭項目，我們亟須建制一套完善作業系統，包含由受理、用交查驗、通繳、印據、核帳、竣工前與障礙維修系統介面，施工進行時之追蹤管制，直至竣工後帳務，維修系統介面。我們原已有一套較完整流程，但是原各系統間介面複雜，無法即時傳送資料，再加上提供的供裝方式日新又新，一但有新的服務與設備引進，各系統又必須花費許多時間修改才能符合需求，有時更因此而造成流程錯誤，平白浪費許多人力與時間在確認資料、更改流程上，本公司亟須改善此問題，以提昇整體競爭力。

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Clarity 為一家電信管理系統軟體發展公司，發展了一套 Clarity System，其中 Operations Support System(OSS)可提供電信公司管理電信業務受理、電信設備、供裝流程控制、帳單併帳、障礙申報與查修流控等功能。此行主要目的為觀摩並實際操作 OSS 系統，了解 OSS 系統如何運作及比較本公司現有各系統的管理及運作有何不同，以期對改善本公司的供裝流程有所幫助。

此次研習依據中華電信股份有限公司九十一年度資本支出派員出國實習計劃，赴澳洲實習「專線系統維運技術」，實習期間自九十一年十一月十七日至二十三日，共計七天，參加於雪梨 Clarity 公司舉行的 OSS 訓練，並參與單機操作，其行程安排如下：

期間	主題
11 月 17 日	去程
11 月 18 日	System Architecture Corporate Manager
11 月 19 日	Configuration Manager
11 月 20 日	Circuit Diagrammer GIS

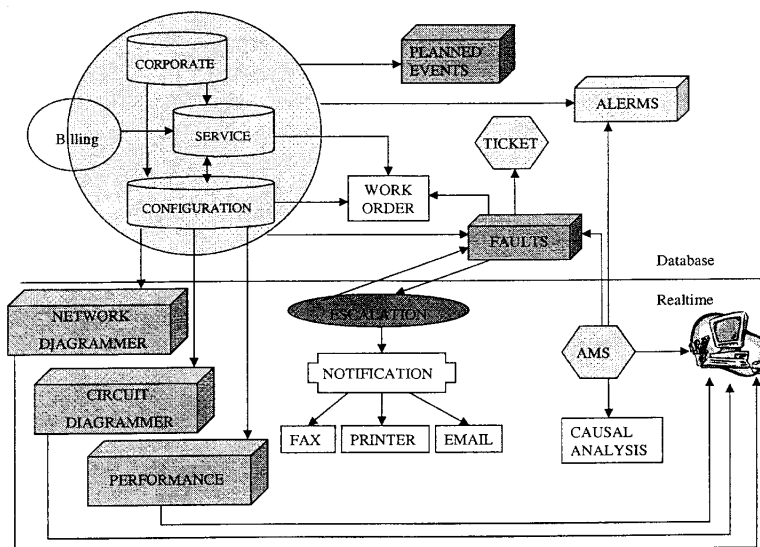| 11 月 21 日	Service Manager Planned Events Manager
11 月 22 日	Fault/Ticket Manager Alarms Manager
11 月 23 日	回程

二、過程

　　本次實習課程從 11/18~11/22 共五天，每天皆有單機操作部分，

下面將對課程內容做介紹。

1. 11/18 日課程內容重點

(1) 熟悉系統操作及課程簡介

　　Clarity 系統包含了聯單受理、帳務、障礙通告、設備管理、光纜

設計管理、電路調訂、工作單派單、直接與網管系統聯繫等功能，如

圖一。而全部的資料，都在一個 Oracle 資料庫中。

圖一

(2) Corporate Manager

　　Corporate Manager 主要包含了 Customer 與 Location/Sites 兩個部分，用以管理 Customer 與帳務相關資訊。Customer 部分包含客戶的唯一 ID、管理客戶的帳寄地址、連絡人、連絡方式的優先順序、客戶下有哪一些服務種類及號碼它們各自出帳的地址、電信公司是哪一位專員要負責與這位客戶連絡等等資料，畫面如同圖二。

圖二

Location/Sites 部分包含所有客戶點與機房位置、這個 Location 屬於哪一個 Customer、Location 的地址、Location 是不是 Customer 的出帳點，畫面如同圖三。本日新增個 Customer、AA1、AA2、B4 三 個 Location。

圖三

這個 Corporate Manager 與我們目前的系統管理方式有一些不太相同，他們將電信公司機房點與客戶資料混合一起管理，解決了併帳問題與電信公司為同一客戶提供哪些種類服務的資料。

2. 11/19 日課程內容重點

(1) Configuration Manager Network Elements 與 Configuration Manager

Cards and Ports

　　Clarity 系統的設備命名方式為 Location+Type+Index，Location：

地點，Type：設備種類，Index：流水號。每個設備最多是三層(即

slot-card-port)管理，且每一台設備有多少 slot、每一的 slot 插何種卡

片、每張卡上有多少 PORT 都由使用者決定，使用者可視需要隨時新

增或刪除。

(2) Defining Port Templates

　　每當有新型態的設備或新型態的卡片時，系統管理者新增一種設

備 Type，使用者只需要新增卡片種類，並將這種卡片有多少 physical

ports 或 logical ports 定成一個 template，即可將這新設備納入管理。

(3) Defining Network Element Templates at Location/Sites

　　系統提供"設備複製"的功能，例如：A 與 B 地皆有相同的設備，

只需在 A 點建好一套設備，再按下"Copy Element From Template"就

會蹦出一個視窗詢問複製設備到哪一點，輸入 B 點地名後，B 點就自

動產生一筆與 A 點相同設備的資料，免除使用者重複輸入資料的困

擾。

(4) Defining a Bearer

　　設備建好後就可將實體電路連接起來(不論實體電路或是虛擬電

路，皆由 Circuit Edit 功能建檔管理)，這兒主要定義電路狀態(Status)、

所屬客戶(Customer)、電路速率(Speed)、電路種類(Circuit Type)、電

路路由(Cross Connections)。Bearer 建檔畫面如圖四。
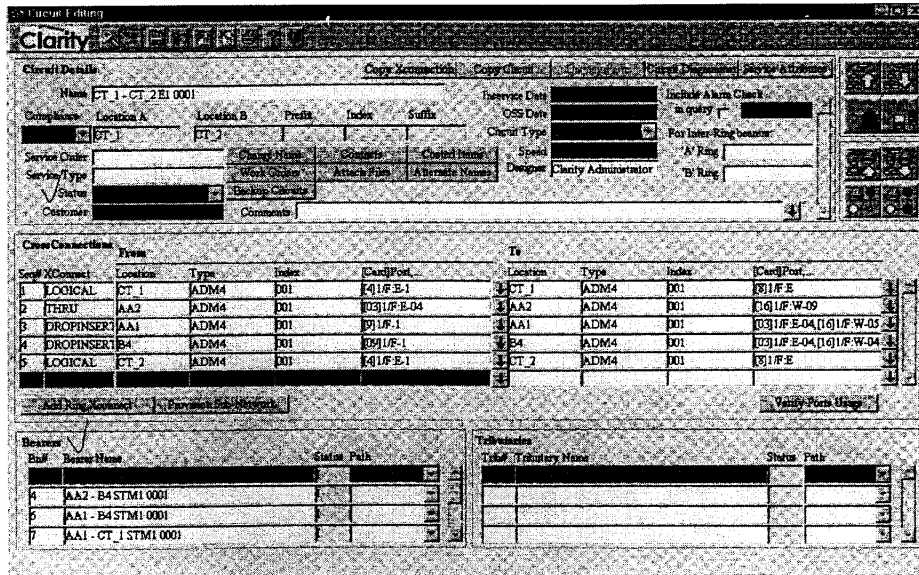
圖四

電路命名方式如下：

[Site A][Site B][Circuit Prefex][Index][Suffix]，例如：AA1-AA2
STM1 0001

電路種類包含有：Bearer、Leased、Switched Svc、Host to LU、

Trunk、International、Interconnect。

本日新增 AA1、AA2、B4 三個 Location 的 ADM 設備，並將三

點的電路連接成一環路。

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3. 11/20 日課程內容重點

(1) Circuit Design

本日承襲 11/19 日課程，新增一個 Customer、新增兩個用戶 Location(CT_1,CT_2)，兩套 ADM 設備，建立自用戶 CT_1 到用戶 CT_2 的 E1 電路。

Clarity 發展一套 Circuit Diagrammer 系統，可顯示電路銜接路由及設備 Port2 的 Logical 圖示，並可依據 Customer、Service Type、Equipment、Service Order 來搜尋，方便試用者確定建立的電路路由是否正確，圖四的電路路由展開後如同圖五。
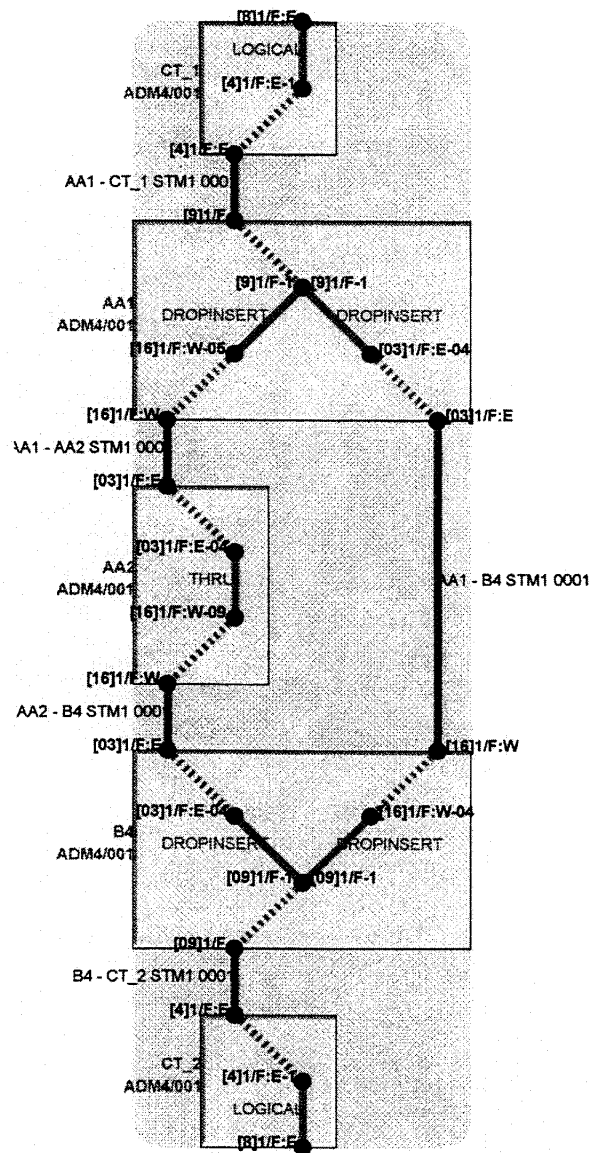
圖五

　　Clarity 計劃不久的將來提供自動搜尋最佳電路路由的功能，讓使

用者輸入搜尋規則後，自動將銜接路由找出，使用者可參考找出的路

由作修改或確認。

(2) 光纜圖示系統(GIS)

對於光纜的管理，Clarity 與外界公司合作，買入地圖資料檔，並合作開發一套光纜圖示系統。使用者可在街道圖上新增/刪除/修改 Location、光纜銜接/引出/引進方式。亦可在街道圖上查詢光纜經過的 Location 中有何設備、有多少 Bearers，但此處無法看出有多少 services，而光纜心線與設備之間的關係也並不詳盡。

4. 11/21 日課程內容重點

(1) Service Manager

新增一筆聯單，並實習聯單抽單/回報等流程。Service Order 畫面如圖六，重要欄位說明如下：

Order Type：新租裝或是註銷或是拆機等類別。

Status：本聯單的狀態，如 In Service(竣工)、Proposed 等等。適當使用 Status 可作為 pre-sale 功能。

Service Type：提供服務的種類，本欄位影響到派工排程，不同的服務種類會有不同的排程。

Speed：根據 Service Type 不同，可選擇需要的速率。

Circuit Name：根據 11/19 介紹的電路命名方式，使用者輸入 Site A、Site Z、Speed 後，系統自行產生 Circuit Name。

Priority：關於 Customer/Service 的 Service Level Agreement。

(2) Element Management

聯單產生後隨即展開派單功能，按下圖六畫面中的"Task List"，系統會根據 Service Type、Order Type 的欄位資料找出應該產生哪些站別、站別的負責單位。為了因應不同服務有不同站別，Clarity 亦將站別的安排開放給系統管理者，只需建立圖七的表單，即可調整流程。圖七欄位說明如下：

Timing：站別順序。

Order Type：新增/異動/拆機...等聯單。

Service Type：服務種類。

Task Name：站別名稱。

Work Group Responsible：站別負責回報單位。

排程如同圖八，服務中心人員可從此處得知聯單狀況。

圖六

圖七

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圖八

(3) Work Orders

派單之後，每個單位的人做好工作後可至 Work Order 回報，這裡以 Create Circuit 這一站為例，畫面如同圖九。每一筆聯單的站別又可細分為多個 Activities 來完成，圖十是 Create Circuit 這一站細分出來的工作項目，第一個項目為"Physical Design"，並依照 Timing 為執行的先後順序，Status 為完成該項目的狀況。當某一站別內的所有 Activities 都完成了，該站別的 Status 就會變成"Completed"，就可以繼續下個流程。

當使用者執行 Circuit Design 時，此時 Circuit 的 Status 為"Proposed"，當 status 改成"In service"時或 status 由"In service"改為其他的狀態時，系統會和網管聯繫，直接啟動或關閉通路。

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圖九

圖十

5. 11/22 日課程內容重點

(1) Fault/Ticket Manager

　　Clarity 將 Fault 定義為來自客戶申報的障礙或是電信設備本身 Alarm 發現的障礙；Ticket 定義為因為 Fault 或其他原因，必須更換 Network 上某一設備或某一卡片的事件。

　　當客戶申告障礙或是設備 Alarm 發生時無法即時解決問題，系統會產生一個 Fault Event，畫面如同圖十一。若處理人員發現需要換卡片或設備才能解決，則可選擇產生一個 Trouble Ticket 流程通知相關單位，Trouble Ticket 編號為 TT0000000108 對應到 Fault 的編號為 1635，畫面如同圖十二。因此 Fault/Ticket Manager 主要是客戶/自發性的障礙申報流控。

圖十一

圖十二

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(2) Alarm Manager

　　Alarm 是設備產生的訊息，Clarity 系統將所有的 Alarm 皆存在資

料庫中並加以分析即時顯示在螢幕上供使用者監控。存在資料庫中主

要是用在當客戶申告某段時間電路品質不良時，提供用做佐證資料。

因為 Alarm 的種類繁多，只有某些 Alarm 才需要使用者做緊急處理，

因此 Clarity 亦將 Alarm 做歸類與分析(如圖十三)，決定緊急程度，並

利用 Alarm Typing 將每個 Alarm 的處理方式留下紀錄，已供下次發生

相同 Alarm 時作處理的參考(如圖十四)。

圖十三

圖十四

(3) Customer Connect

當有 Fault/Ticket 出現或是有 Planned Event(例如：光纜改接)時，

系統能列出所受影響的所有電路及客戶，並根據所登錄客戶連絡方式

的順序，自動與客戶連絡。如自動送發 e-mail、自動語音通知等。

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三、心得

經過這次觀摩，覺得事前規劃分析與 team work 十分重要，看到國外公司如何發展一個電信管理系統是一個很好的經驗。透過彼此的溝通，也一再驗證我們管理系統(OPTIMA 與 PAMS)架構的觀念是與國外同步的，受理系統的觀念也是大同小異。唯一較大的不同點，大概只在於我們發展的系統主要只給本公司內部使用，因此在設計時就將一些建檔管理的方式訂在程式中，減少人為判斷的機會，方便公司同仁使用，因此遇到一些新設備或服務時，常要修改系統，系統的彈性不大；而 Clarity 公司的系統因為要符合絕大多數電信公司的要求，將建檔管理的方式設計的很有彈性，但也因此造成人為判斷大增，提高了建檔管理的複雜性。看看別人想想自己，發現自己有一些地方可以改進，也得到一些改進的想法，此行的收穫頗多。

四、建議

由於 Clarity 與各家電信設備廠家均有簽約，以確保有新電信設備推出前能提前收到相關資料，例如設備的規格、網管設備相關資料等，所以在設備推出前，Clarity 均能將系統做好必要的修正動作，因此可在 6 週內因應新設備推出新的服務。這與研究所發展系統的環境不太相同，因為各系統常是服務要推出了還不知道設備的規格，以致匆忙中未能將設備管理的方式做周詳的考慮。日後是否能及早得知設備規格，才有足夠的時間做好準備。

Clarity 系統有一點與本公司非常不同，那就是他們只用一個資料庫，所有的資料都只存在一個很大的資料庫中，所以不論對電路調訂、障礙查修、帳單整合等等的功能，都在一個系統中。相較於本公司的系統，因為其歷史因素及各單位需求不同，多年來也各司其職，在各自領域發揮很大的功能，但是若要一些整合性的資料時，系統間資料的傳遞就變得複雜又頻繁，例如想要知道目前某一設備上提供的服務與影響的客戶有哪些，就要透過各系統間相互連絡傳遞資料才能完成。因此本公司的各系統間是否能做某種程度的資料整合，盡量減少利用一些介面傳遞資料或儲存兩份相同資料在不同系統中。

五、附件

　　Clarity 公司提供上課實習 OSS 系統各功能之欄位說明文件，包

括以下單元：

1. Customers and Accounts
2. Locations / Sites
3. Editing Circuits
4. Service Orders
5. Implementation Task List
6. Work Orders
7. Fault Edit
8. Trouble Tickets
9. Alarm Types

Customers Section

Fields

The fields in the Customers section are:

Field	Description
Abbreviation	Unique code used to identify the customer. (Mandatory)
Name	Complete customer, company or carrier name. (Mandatory)
Type	The valid customer classification (e.g. Corporate, Government, Residential etc.). Use the **LOV** button to select a valid option. (Mandatory)
Status	Current status of the customer (e.g. active). Use the **LOV** button to select a valid option. (Mandatory)
Company Number	The customer company registration/ABN number.
Industry Code	Industry classification that the customer may be grouped into (e.g.TELCO). Use the **LOV** button to select a valid option.
Feedback in Hours	Agreed number of hours to notification during an outage or fault as per SLA terms. The default value in this field is one hour.
Comments	Free text field for comments about a selected customer record. Use the **lookup** button next to this field to view the **Editor** screen.

Customers Section

Buttons

The buttons in the Customers section are:

Button	Description
Alternate Names	Opens the **Alternate Customer Names** screen
	Use this screen to assign an alternate name or reference to a customer. See *Assigning Alternate Names to Customers* on page 25 for more information.
Attach and View Files	Opens the **File Attachments** screen.
	Use this screen to attach associated files such as documents and spreadsheets to the selected customer record. See *Linking External Files to Customers* on page 26 for more information about attaching files to a customer record.
Customer Contact List	Opens the **Customer Contact Details** screen
	Use this screen to view customer contact details. See *Viewing Customer Contact Details* on page 29 for more information.
Customer Address List	Opens the **Customer Address List** screen
	Use this screen to view customer address details. See *Viewing a Customer's Address List* on page 32 for more information.

Accounts Section

Use the Accounts section to view account information associated with a selected customer.
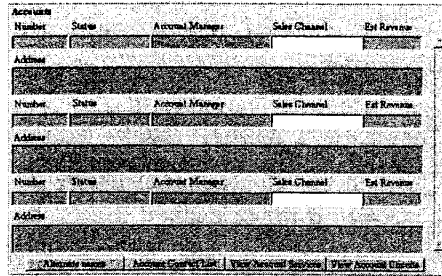
Fields

The fields in the Accounts section are:

Field	Description
Number	Unique free text customer account number. (Mandatory)
Status	Current status of the account. Use the **LOV** button to select a valid option. (Mandatory)
Account Manager	Person responsible for managing this account. Use the **LOV** button to select a valid option.(Mandatory)
Sales Channel	Free text name of sales group.
Est Revenue	Anticipated income from this account on a monthly basis, in figures. (Mandatory)
Address	Account location or mailing address. Values to be selected are limited to addresses that have been registered as billing points for the selected customer. Use the **LOV** button to select a valid option. (Mandatory)

Buttons

The buttons in the Accounts section are:

Button	Description
Alternate Names	Opens the **Alternate Names** screen. Use this screen to assign an alternate name or reference to an account. See *Assigning Alternate Names to Accounts* on page 33 for more information.
Account Contact List	Opens the **Account Contact Details** screen. Use this screen to view account contact details. See *Viewing Account Contact Details* on page 30 for more information.
View Accounts Services	Opens the **Accounts Services List** screen. Use this screen to view the services that are associated with the selected account. See *Viewing the List of Services for an Account* on page 34 for more information.
View Account Circuits	Opens the **Accounts Circuit List** screen. Use this screen to view the circuits that are associated with the selected account. See *Viewing Circuit Details for an Account* on page 35 for more information. Double-click a record in this screen to open the **Circuit Editing** screen.

Locations/Sites

Use this section to view details about locations or sites that are used within the application.

Fields

Fields in the Locations/Sites section are:

Field	Description
Location/Site Code	Unique free text code that identifies this site.
Description	Full free text description of the site. (40 alpha-numeric character maximum)
Region	Geographical area in which the site resides. The value must exist in the **Code** field of the **Regions** reference screen. (15 character maximum) Use the **LOV** button to select a valid option.
Nearest Node	The closest node to site for customer access. Use the **LOV** button to select a valid option.
Location/Site Type	Classification of site. (e.g. nodes, admin, customer, other Carrier etc.) The value must exist in the **Abbreviation** field of the **Location/Site Types** reference screen. (15 character maximum) Use the **LOV** button to select a valid option.
Billing Point	Indicates if this site is an address for customer billing. Select either **Yes** or **No**.
Customer Manufacturer	Indicates how the site is attached. Select either **Customer** or **Manufacturer**.
Customer/ Manufacturer	Valid customer or manufacturer abbreviation used to direct the search results in the screen. The **Manufacturer** abbreviation must match the **Type** field in the **Customers and Account** screen. (15 character maximum) Use the **LOV** button to select a valid option.

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Address

Use the Address section to view address details for a specific location/site. The fields in this section are non-mandatory.

Fields

The fields in the Address section are:

Field	Description
Number	Free text Street number. (15 character maximum)
Street	Free text Street name. (15 character maximum)
Post Code	Free text Zip/postal code for the area. Value should exist in the **Code** field of the **Post Codes** reference screen.
Suburb	Free text area within the town/city. Value should exist in the **Suburb** field of the **Post Codes** reference screen. (15 alpha numeric character maximum)

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Circuit Details

Use this section to view circuit detail information.

Fields

The fields in the Circuit Details section are:

Field	Description
Name	The unique circuit name that has been *created* and *saved* in the database. This field is used to query a circuit in the database.
Compliance	The compliance standard for the circuit name. There are two compliance standards available: • ANSI • ITU The five fields that are displayed directly to the right of the Compliance field change names as you select a value for Compliance. See *ANSI Circuit Name Compliance Fields* on page 34 for a description of these five fields when you select ANSI. See *ITU Circuit Name Compliance Fields* on page 34 for a description of these five fields when you select ITU.

Field	Description
Service Order	Service order number concatenated with the service order revision number. This number is automatically generated if this circuit is part of a work order.
Service Type	The type of service that is supplied on the currently selected circuit.
Status	Current status from the set of values.
Customer	Customer owning or leasing the service.
Inservice Date	Date service is expected or placed into service. Format is DD-MMM-YYYY.
Speed	Guaranteed speed of operation for this service.
Circuit Type	Classification of this service. "Lease", "Bearer", etc. Use the drop-down menu to make a selection.
Designer	Person who designed (created) the circuit including the network element interconnections.
Include Alarm check in query	Select this box if a check is to be made on alarms as part of a query.
For Inter-Ring bearers: 'A' Ring	If the circuit is used to connect two Rings, select the A end of the ring.
For Inter Ring bearers: 'B' Ring	If the circuit is used to connect two Rings, select the B end of the ring.
Comments	Free text area for comments. Click the 🖳 button to display the Editor screen. In the Editor screen you can view, enter, delete or modify text.

Buttons

The buttons in the Circuit Details section are:

Button	Use to...
Copy Xconnection	Open the **Copy Circuit** screen. See *Copying Circuit Cross Connections* on page 53 for more information about copying circuit cross connections.
Copy Circuit	Open the **Copy Circuit** screen. See *Copying Circuit Records* on page 52 for more information about copying circuits.
Circuit Diagrammer	Open the **Clarity Circuit Diagrammer** application. See the *Clarity Circuit Diagrammer User Manual* for more information.
Circuit Attributes	Open the **Circuit Attributes** screen. The screen displays attributes for the circuit.
ServiceAttributes	Open the **Service Attributes** screen. Use this screen to associate a set of service attributes with the currently displayed circuit.
Change Name	Open the **Circuit Name Change** screen. This button is unavailable for circuits that have been created via a service order.
Contacts	Open the **Circuit Contacts** screen.
Costed Items	Open the **Costed Item Lists** screen.
Work Orders	Opens the **Current Work Orders** for this Circuit screen. This button is not available for circuits that have been created via a service order.
Attach Files	Open the **File Attachments** screen.
Alternate Names	Open the **Alternate Circuit Names** screen. Use this screen to add, modify or delete alternative names for the selected circuit.

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Button	Use to...
Backup Circuits	Open the **Backup Circuits** screen where you can specify circuits to use during network outages or network degradation.
	See *Specifying Backup Circuits* on page 58 for more information.

ANSI Circuit Name Compliance Fields

When you change the **Compliance** field to **ANSI**, the five fields displayed to the right of the **Compliance** field change names.

The fields displayed for ANSI circuit names are:

Field	Description
Location A	The A end location name.
Location B	The B end location name.
Ch/Ts	The channel or time slot code.
Type Code	The facility type code.
Desig Code	The facility designation code.

ITU Circuit Name Compliance Fields

When you change the **Compliance** field to ITU, the five fields displayed to the right of the **Compliance** field change names.

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The fields displayed for ITU circuit names are:

Field	Description
Location A	The A end location name.
Location B	The B end location name.
Prefix	A prefix that is placed within the circuit name. This prefix is often used to identify the speed of the circuit.
Index	The sequence number of the circuit.
Suffix	An optional suffix that can be appended to the circuit name.

Buttons

There are two sets of buttons on the Circuit Editing screen:
- display buttons
- report buttons

Display Buttons

The display buttons are:

Button	Use to...
	Zoom up through the circuit hierarchy and view the bearers for a particular circuit detail record.
	Zoom down through the circuit hierarchy and view the tributaries for a particular circuit detail record.
	Display the **Circuit Affecting Alarms** screen in context sensitive mode for the selected circuit. See *Circuit Affecting Alarms* on page 43 for more information on displaying alarms that have affected a circuit.

Button	Use to...
	Display the **Network Elements** screen in context sensitive mode for the selected circuit. See *Opening the Network Elements Screen* on page 66 for more information on viewing network element details for the selected circuit.

Report Buttons

Use the following report buttons to produce a report for the selected circuit.

Button	Use to...
	Show the **Circuit Hierarchy (up)** report for the selected circuit. This report shows the circuits that are used as bearers to carry the service.
	Show the **Circuit Hierarchy (down)** report for selected circuit. This report shows the circuits that are used as tributaries.
	Show the **Circuit Layout** report for the selected circuit. This report provides specific circuit information for the selected circuit.
	Show the **Circuit Routing Report** for the selected circuit. This report shows routing information for the selected circuit.

Cross Connections

This section shows the cross connections for the selected circuit.

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Fields

The fields in the Cross Connections section are:

Field	Description
Seq#	Order number for the cross connection appearance in screen. Double click this field to open the **Cross Connection Details** screen.
Xconnect Type	Describes the cross connection to give meaning, e.g. "Drop insert" or "Patch". Double click this field to open the **Port Link Details as Loaded from Form** screen.
(From) Location	Location of network element.
(From) Type	Type of network element.
(From) Index	Instance of network element.
(From) [Card] Port	Terminating card port name of the network element (1 or more).
(To) Location	Location of network element.
(To) Type	Type of network element.
(To) Index	Instance of network element.
(To) [Card] Port	Terminating port name of the network element (1 or more) and slot where the card is located.

Cross Connection Buttons

The buttons in the Cross Connections section are:

Button	Use to...
↓	Open the **Port Parameters** screen.

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Button	Use to...
Add Ring Xconnect	Display the **Ring Cross Connections** screen. Use this screen to create cross connections through a ring for a selected circuit. See *Ring Cross Connections* on page 60 for more information on creating cross connections.
Provision Sub-Network	Display the **Provision a Service across a Sub-Network** screen. Use this screen to define a route for a circuit through a sub-network. See *Creating Sub-Network Connections* on page 64 for more information on creating sub-network connections.
Verify Ports Usage	Check that the ports selected in the cross connections are not reserved for use by other circuits. If there are ports reserved by other circuits, such as circuits with a status of Out Of Service, the **Other Circuits Reserving These Ports** screen is displayed, listing the ports and associated circuit names.

Bearers

This section displays the bearer circuits that carry the selected circuit.

Figure 3–6. *Bearers section of the Circuit Editing screen*

✓ **Note**

Use this section to view the bearers that carry the circuits defined in the Cross Connections section. Do not use this section to add or delete bearers.

To view the bearer details in the **Circuit Editing** screen, select a bearer and use the **Zoom Up** button in the Navigate section.

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Fields

The fields in the Bearers section are:

Field	Description
Brr#	Number indicating the order of bearers where more than one are chained to provide a path for the circuit.
Bearer Name	Unique circuit name.
Status	Indicates if the bearer is in (P) Planning stage or (I) Inservice or (O) Out of service. This field is completed by default when the bearer record is saved.
Path	The path the bearer is used for. This is the value allocated for the bearer in the **Routing Definition** screen.
	You can change the value of this field by clicking on ⊡ at the right of the **Path** field to choose a value from the drop down list. This is not a protected path.

Tributaries

This section displays the tributary circuits that are carried by the selected bearer circuit.
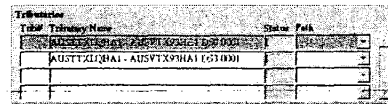
✓ **Note**

Use this section to view the tributary circuits that are carried by the circuits defined in the Cross Connections section. Do not attempt to add or delete tributaries using this section.

To view the tributary circuit details in the **Circuit Editing** screen, select a tributary record and use the **Zoom Down** button in the Navigate section.

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Fields

The fields in the Tributaries section are:

Field	Description
Trib#	Tributary order within bearer. May be the logical tributary number.
Tributary Name	Unique circuit name.
Status	Indicates if the tributary is in (**P**) Planning stage or (**I**) Inservice or (**O**) Out of service. This field is completed by default when the bearer record is saved.
Path	The path the tributary is used for. This is the value allocated for the tributary in the **Routing Definition** screen. You can change the value of this field by clicking on ⊠ at the right of the **Path** field to choose a value from the drop down list. This is not a protected path.

Table 3–10. Tributaries section fields

Service Orders Section

Use this section to enter or view service order details.

The first two fields in this section form part of the extended functionality to link a particular service order to a customer service request record directly.

Fields

The fields in the Service Orders section are:

Field	Description
Project#	This field is for future functionality.
CSRF# - Request#	The unique system-generated combination of the customer service request number and the request number.
Service Order Number	The unique service order identifier number. This is a read-only field. When you create a new service order record, this field is automatically populated with an identifier of the following format: Market Segment + yyyymmdd + 3 digit sequence If the service order is cancelled, this number cannot be reversed or re-used.
Revision	The revision number of the service order. This is a display only field that is always **0** for new service orders.
Market Segment	The classification of the customer market category. The market segment is used to associate a service order with a market zone, area or cost center. For example: *Inbound Minutes are always wholesale therefore the market segment **W1** (Wholesale Inbound) is used when provisioning TDM Inbound Minutes.* Use LOV to select an option. Market Segments are defined in the **Market Segments** reference screen. See *Market Segments Screen* on page 274 for more information. (Mandatory)

Field	Description
OE Work Number	The number allocated to the service order if it is generated by an external order entry system.
Carrier Service Id	Unique free text user-entered identifier for the carrier selected. Complete this field if the service order needs to be identified by another carrier's reference value.
Customer	The unique identifier of the customer requesting the service. Use LOV to select a customer number. (Mandatory) If this service order is for a customer service request, this field displays the customer value listed in the customer service request form or the order entry input, and cannot be changed.
Order Type	The service order type requested by the customer. Use LOV to select an option. The values are defined in the **Order Types** reference screen. The default Clarity options are: • Create • Delete • Modify • Regrade- (Circuits being worked on cannot be regraded.) • Resume- (Only out of service circuits can be resumed.) • Suspend- (Only inservice circuits can be suspended.) (Mandatory) If the service is provisioned for the first time, the order type is **Create**. **Note:** *If the service order originates from an order entry request, this value corresponds to the order type value in the order entry, and cannot be changed.*

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Field	Description
Status	The current status of the service order. This field is mandatory. Use LOV to select one of the following values: • Proposed • Recommended • Reviewed • Approved • Rejected • Cancelled • Closed See *Understanding Service Order Status* on page 75 for more information on status details.
Status Date	The date the Status value was changed to the current status value. This field is automatically populated with the current date whenever the status is changed. The format is **dd-mmm-yyyy**.
Service Type	The abbreviation of the service type requested by the customer (e.g. the service type for TDM Inbound is WILV01). Use LOV to select a value. The values are defined in the **Service Types and Attributes** reference screen. (Mandatory)
Traffic Application	The traffic type carried over the service. Use LOV to select a value. The values are defined in the **Traffic Types** reference screen.
Site A	The location identifier for the *start* of the service. This also indicates the E1 circuit's originating point. Use LOV to select a location; the locations displayed using LOV are only the locations for the customer selected in the **Customer** field. Locations are defined in the Clarity Corporate Manager module. (Mandatory)
Site Z	The location identifier for the *end* of the service. This also indicates the E1 circuit's terminating point. Use LOV to select a location; the locations displayed using LOV are only the locations for the customer selected in the **Customer** field. Locations are defined in the Clarity Corporate Manager module. (Mandatory)

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Field	Description
Speed	The operational speed of the service within the limitations of-the circuit that carries the service. Use LOV to select a value. Values are defined in the **Service Speeds** reference screen. This field is not available for service orders of order type **modify**. Mandatory for all other types of service orders. **Note:** *For TDM Inbound Minutes, a unit is always measured as E1.*
Service Identifier	The system generated circuit identifier assigned when the user completes the **Create Circuit** task within workflow system. You cannot change this value once it has been assigned.
Priority	The priority level of the service order. Each service order needs to be prioritized. Priority is flagged against a service order to indicate the level of urgency to roll out a service. Use LOV to select a value. Values are defined in the **Service Order Priorities** reference screen. (Mandatory)
Protocol	The communications protocol required for a circuit to carry the service. Use this field to identify the communications protocol that must be considered when the circuit is being designed.
No. Channels	The number of channels available for the service, based on the speed, of bandwidth, of the circuit. This value does *not* determine operating or redundant capacity.
Site (A) Address	The address details of the location selected in the **Site A** field. This is a read-only field.
Site (Z) Address	The address details of the location selected in the **Site Z** field. This is a read-only field.
Contract Number	Number identified in the customer Service Level Agreement contract, and which refers to the sale.
Interface Type	The connection type, for example, V35, R232, RS422, and so on.

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Field	Description
RTS Number	The associated request for technical study (RTS) number.
PTS Number	The associated preliminary technical study (PTS) number.
Carrier	The alternate carrier identifier or name, if required. Use LOV to select a value.

Button

The button in the Service Orders section is:

Button	Use to...
Copy	Copy the current service order and selected data to a new service order record. **Note:** You can only do this if the service order is not entered through the order entry system. See *Copying Service Orders* on page 106 for more information about copying service orders.

Table 4-2. Service Orders section button

Approvals Section

The Approvals section displays the various stages of approval needed to complete a service order.

(✓) **Note**

You can only update service orders that are allocated to your work group.

Fields

The fields in the Approvals section are:

Field	Description
Account Manager	The name of the account manager who requested the service order. This field is *not* mandatory if the service order is generated by the order entry system, otherwise, this field is mandatory. Use LOV to select a value; the values displayed in the LOV are only account managers associated with the customer entered in the **Customer** field.
Sales Date	The date of the sale. This date is generated automatically after selecting a value in the Account Manager field. The format is **dd-mmm-yyyy**.
Account Number	The customer's account number. If the customer has only one account number, this account number is automatically populated, and is a read-only field. If the customer has two or more account numbers, use LOV to select a value.
Required Date	Indicates the original creation date of the service order. Defaults to the current date. The format is **dd-mmm-yyyy** and **hh:mm:ss**.
Commit Date	The date committed to by the account manager to supply the completed service. The default value is 15 days from the current date. The format is **dd-mmm-yyyy** and **hh:mm:ss**. This field is mandatory.
Created By	The name of the user who created the service order record. This field is automatically populated with the name of the user who creates this service order record.
Work Group	The name of the work group that the user who created this service order records belongs to. This field is automatically populated with the work group name of the user who creates this service order record.
Installation Cost	The cost of installing the service.
Equipment Rental	The monthly charge for renting the equipment.

Field	Description
Monthly Rental	The monthly charge for the service, however, this charge does not include the equipment charge.
Billing Advised	The date that the billing group was advised that this service order is completed and accepted by the customer. The format is **dd-mmm-yyyy**.
Billing Activated	The date that the billing group implemented correct charges. The format is **dd-mmm-yyyy**.
Discount Date	The date the discount was applied. This field is automatically populated when the **Discount Applied** field is selected. The format is **dd-mmm-yyyy**.
Credit Check	Indicates if a credit check has been applied to the customer.
Discount Applied	Indicates if a discount has been given to this customer.
Reason for Cancellation	The reason why a service order was cancelled. Use LOV to select an option.
Rejection Reason	The reason why a service order did not meet approval and was rejected. Use LOV to select an option.
Jeopardy Status	The status of a service order in danger of not being processed or completed. Use LOV to select an option.
Accepted By	The name of customer who accepted the service order.
Accepted Date	The date the service order was accepted. This date is generated automatically after entering a value in the **Accepted By** field. The format is **dd-mmm-yyyy**.
Recommended By	The name of the user who recommended the service order. This field is automatically populated with the user's name if it is executed from a service implementation task list. Otherwise, to enter a value, double-click this field to populate it with your name.

Field	Description
(Recommended) Date	The date the service order was recommended. This date is generated automatically after entering a value in the **Recommended By** field. The format is **dd-mmm-yyyy**.
Reviewed By	The name of the user who reviewed the service order. This field is automatically populated with the user's name if it is executed from a service implementation task list. Otherwise, to enter a value, double-click this field to populate it with your name.
(Reviewed By) Date	The date the service order was reviewed. This date is generated automatically after entering a value in the **Reviewed By** field. The format is **dd-mmm-yyyy**.
Approved By	The name of the user who approved the service order. This field is automatically populated with the user name if it is executed from a service implementation task list. Otherwise, to enter a value, double-click this field to populate it with your name.
(Approved By) Date	The date the service order was reviewed. This date is generated automatically after entering a value in the **Approved By** field. The format is **dd-mmm-yyyy**.

Buttons

The buttons in the Approvals section are:

Button	Use to...
Move SO To Other Project	This button is for future functionality.
Circuit Diagrammer	Open the Clarity Circuit Diagrammer application, after the Circuit Design task is complete. See the *Circuit Diagrammer User Manual* for more information about how you use the Circuit Diagrammer application.

Service Order Comments Section

Use this section to enter comments related to the service order.

Fields

The fields in the Service Order Comments section are:

Field	Description
Seq	The sequence number of the comment. This number is automatically generated as you add new comments.
Time Stamp	The date and time that the comment was added. This field is automatically populated with date and time when the comment is added. The format is **dd-mmm-yyyy** and **hh:mm:ss**.
Text	The service order comments. This is plain text field with a maximum length of 100 characters.

Table 4-5. Service Order Comments section fields

Button

The button in the Service Order Comments section is:

Button	Use to...
All Comments	Open the **View all Comments** screen that lists the full history of comments entered for the current service order. See *Viewing Service Order Comments History* on page 105 for more information.

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Actions Section

Use the Actions section to initiate one of the available actions.

Buttons

The buttons in the Actions section are:

Button	Use to...
Task List	Open the **Service Implementation Tasks** screen where you can specify pre-defined tasks and user defined tasks to implement the service order. See *Setting Up Implementation Task Lists for Service Orders* on page 78 for more information.
Service Attributes	Open the **Service Attributes** screen. See *Assigning Attributes to Service Orders* on page 97 for more information.
View Circuit	Open the Clarity Circuit Diagrammer application in relation to the selected service order based on **Site A, Site B** and **Speed** information. See *Viewing Circuit Diagrams for Service Orders* on page 92 for more information.
Create/View WO	Display work orders associated with the selected service order and also allows you to create new work orders. See *Creating and Viewing Work Orders for Service Orders* on page 99 for more information.
View Test Results	Open the **Test Results** screen in relation to the selected service order. See *Creating and Viewing Work Orders for Service Orders* on page 99 for more information.
Costed Items	Open the **Costed Item List For Service Orders** screen in relation to the selected service order. *See Costed Items* on page 95 for more information.
Equipment List	Open the **Service Equipment List** screen for the selected service order. See *Creating Equipment Lists for Service Orders* on page 93 for more information.

Button	Use to...
View Delivery Report	Open the **Service Delivery Report** screen in relation to the selected service order. See *Viewing Service Delivery Reports* on page 103 for more information.
Reject/Cancel SO	Open the **Cancellation/Rejection Reason** screen. See *Rejecting or Cancelling Service Orders* on page 107 for more information.

Fields
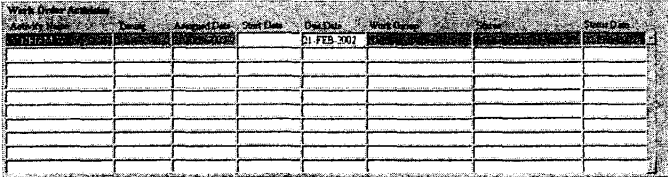
The fields in the **Implementation Task List** reference screen are:

Field	Description
Timing	Timing sequence number used to order the task list in a sequential manner in the template. (Mandatory)
Order Type	Action to be carried out for a Work Order or service order. Use LOV to select an option. (Mandatory)
Service Type	Service being provided to the customer. Use LOV to select an option. (Mandatory)
Task Name	Description of the Implementation Task. Use LOV to select an option. (Mandatory)
Work Group Responsible	Work Group responsible for implementing this kind of task list. Use LOV to select an option. (Mandatory)
Allowed Period (Minutes)	Period in minutes allocated for completion of the task.
Sort Code	Desired order that the tasks with the same timing will be displayed on the screen.

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Work Activities Section

Use the Work Activities section to review and add work order activities for the current work order.

(✓) **Note**

*This section is displayed when you click the **Work Order Activities** button from within the Work Order Comments section.*

Fields

The fields in the Work Order Activities section are:

Field	Description
Activity Name	The name of the work order activity. Use LOV to select a valid work order activity name. This field is mandatory.
Timing	The sequence number allocated to the work order activity. The numerical value assigned to each work order activity should be allocated in ascending order, so that the first work order activity has a Timing value of **10**, the second **20**, the third **30**, and so on. This field is mandatory.
Assigned Date	The date the work order activity was assigned to the work group. The default value is the current date.
Start Date	The date the work order is scheduled to commence.
Due Date	The date the work order is scheduled to be completed.

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Field	Description
Work Group	The name of the work group that the work order is assigned to. Use LOV to select a valid option. This field is mandatory.
Status	The current status of the work order activity. Use LOV to select one of the following values: • Assigned • In Progress • Completed This field is mandatory.
Status Date	The date the status for this work order activity was last changed. When you change the status of a work order activity, this field is automatically populated with the current date.

Button

The button in the Work Order Activities section is:

Button	Use to...
Test Results	Open the **Test Results** screen. See *Test Results* on page 182 for more information.

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Work Activity Comments Section

Use the Work Order Comments section to enter additional comments about each work order activity listed in the Work Order Activities section.

✓ **Note**
*This section is only displayed when you click the **Work Order Activities** button.*
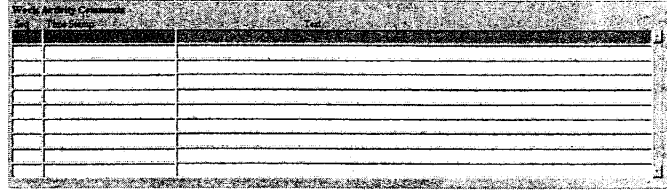
Fields

The fields in the Work Activity Comments section are:

Field	Description
Seq	The sequence number of the work order activity comment. This field is automatically populated when you add a new comment.
Time Stamp	The date the work order activity comment was added. This field is automatically populated when you add a new comment.
Text	The comments about the work order activity. This is a free text field.

Section	See...
Work Order Comments	page 160
Work Order Activities	page 162

Work Order Section

Use the Work Order section to enter details and costs associated with the creation of a work order.

Fields

The fields in the Work Order section are:

Field	Description
Work Order Number	The unique work order identification number. When you create a work order, this field is automatically populated. The number is based on the year, month, day, sequence and market segment.
Revision	The work order revision number. This field is automatically populated as you create new revisions.

Field	Description
Service Order Number	The service order identifier number associated with this work order. Work orders should be associated with a service order, however, you can create a work order without associating it with a service order. When you create a work order that is related to a service orders, this field is automatically populated.
Revision	The service order revision number. This field is automatically populated with the revision number of service order when the work order is created.
Work Group	The name of the work group assigned to complete the work order.
Order Type	The work order type. Use LOV to select one of the following valid options: • Create – create a new circuit. • Modify – modify an existing circuit, either to regrade, resume, or suspend the circuit. • Delete – delete an existing circuit.
Market Segment	The market segment category for the selected customer. Use LOV to select a value.
Created By	The name if the user who created the work order record. This field is automatically populated with the name of the user who creates this work order record.
(Created By) Date	The date the work order was created. This date is generated automatically when the **Work Orders** screen is displayed. The format is **dd-mmm-yyyy** and **hh:mm:ss**.
Reviewed By	The name of the person who reviewed the work order. This field is populated with the current user name when the reviewing user double-clicks this field.
(Reviewed By) Date	The date the work order was reviewed. This date is automatically generated after entering a value in the **Reviewed By** field. The format is **dd-mmm-yyyy**.

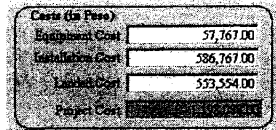| Field	Description
Approved By	The name of the person who approved the work order. This field is populated with the current user name when the approving user double-clicks this field.
(Approved By) Date	The date the work order was approved. This date is automatically generated after entering a value in the **Approved By** field. The format is **dd-mmm-yyyy**.
Expenditure Reference	The reference number used in your organization's accounting system for the costs associated with this work order.
Due Date	The date the work order is due for completion. The format is **dd-mmm-yyyy**.
Circuit Name	The name of the circuit that the work order is created for. Use LOV to select a circuit name.
Status	The current status of the work order. Use LOV to select one of the following values: • Assigned • In Progress • Cancelled • Closed
Date	The date the Status value was changed to the current status value. This field is automatically populated with the current date when you change the Status value. The format is **dd-mmm-yyyy**.
Problem No.	The problem number associated with the work order.
Trouble Ticket No.	The trouble ticket associated with the work order.
Trunk Group Name	The Trunk Group name as stored in the switch.
Description	The description of the work order. This is a free-entry text field.

Buttons

The buttons in the Work Order section are:

Button	Use to...
Details	Opens the **Service Order Details** screen in Read Only mode. See *Viewing Service Order Details* on page 177 for more information.
New Revision	Creates a new revision for the work order displayed. See *Modifying Work Orders* on page 175 for more information.
Costed Item List	Opens the **Costed Item List for Work Orders** screen. This is used to relate costs to work orders.
	Costed items are types of equipment that have been assigned as a costed item in the Clarity system. See *Costed Items* on page 178 for more information.
Attach and View Files	Opens the **File Attachments** screen.
	Use this screen to attach associated files such as documents and spreadsheets to the selected customer record. See *Linking External Files to Work Orders* on page 172 for more information about attaching files to a work order record.

Costs Section

Use the Costs section to enter details of costs associated with the work order.

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Fields

The fields in the Costs section are:

Field	Description
Equipment Cost	The cost of leasing the equipment.
Installation Cost	The cost of implementing the work order.
Landed Cost	The final cost of the project.
Project Cost	The total cost of project. This is the sum of: Equipment Cost + Installation Cost + Landed Cost

Work Order Comments Section

Use the Work Order Comments section to enter additional comments about the work order.

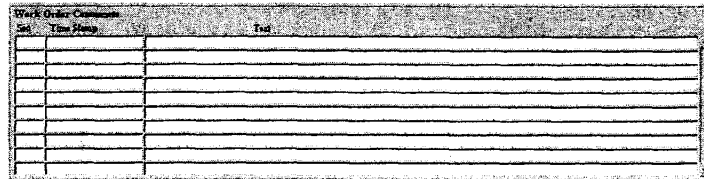*Figure 6–4.* Work Order Comments section

Fields

The fields in the Work Order Comments section are:

Field	Description
Seq	The sequence number of the work order comment. This field is automatically populated when you add a new comment.

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Field	Description
Time Stamp	The date the work order comment was added. This field is automatically populated when you add a new comment.
Text	The comments about the work order. This is a free text field.

Table 6-4. Work Order Comments section fields (sheet 2 of 2)

Button

The button in the Work Order Comments section is:

Button	Use to...
Work Order Activities	Toggle the display between the Work Order, Costs, and Work Order Comments sections, and the Work Order Activities and Work Activity Comments sections. Click this button to see the Work Order Activities and Work Activity Comments sections. See *Creating Work Order Activities* on page 169 for more information about creating work order activities.

Fault Details

Use this section to specify the fault details.

(✓) **Note**

Mandatory fields in this screen are blue.

Fields

The fields in the Fault Details section are:

Field	Description
Number	The unique identifier of the fault. This number is automatically generated by the Clarity system when you save a new fault record.
Parent Fault Number	If this fault is related to a parent fault, the parent fault number is displayed.

Field	Description
Relation	The relationship of the current fault. If this fault is a parent, **PARENT** is displayed. If this fault is a child to a parent fault, **CHILD** is displayed. If the fault has no relationship with other faults, this field is blank.
Reported By	Name of the person that reported the fault. This is a mandatory field.
On	The date and time that the fault was reported. This is a mandatory field.
Contact	The Contact number of the person reporting the fault.
Priority	Priority of the fault and associated actions. This is a mandatory field.
Description	A brief description of the fault. This is a mandatory field.
Work Group	Name of the work group that the fault has been allocated to. This is a mandatory field.
Acknowledged By	Name of the person that acknowledged the fault. This field is completed by default, if and when the next (**On**) field is populated.
On	The date and time that the fault was acknowledged.
Cause	The main cause.
Entity	The main entity involved.
Impact	The impact of the fault on the network.
Other Carrier F/N	The fault identification number for the fault reported by the alternative carrier.
Other Carrier	Name of the alternative carrier that reported the fault.
Disputed Amt.	A non-mandatory, 5 digit long positive amount.

Field	Description
Cleared By	Name of the person that cleared the fault. This field is completed by default, if and when the next (**On**) field is populated.
on	The date and time the fault was cleared.
Clearance Code	Australian Communications Industry Forum (ACIF) designed fault clearance protocol. This field is made up of five parts: • Location • Network 1 • Network 2 • Action • Cause Clearance codes are maintained in the **Fault Clearance Code** reference screen. See *Fault Clearance Codes* on page 102 for more information about maintaining clearance codes.
Confirmed By	Name of the person that confirmed the fault.
on	The date and time the fault was confirmed.
CRM Identifier	
Entered By	Name of the person that last created the record. This is a read-only field that is completed by default. It cannot be changed.
on	Date and time the fault was entered in the **Fault Edit** screen. This field is completed by default. It cannot be changed.
Work Group	Name of the work group that contains the employee that created the record. This is a read-only field that is completed by default. It cannot be changed.

Buttons

The buttons in the Fault Details section are:

Button	Use to...
Show Relation	If a value of PARENT or CHILD is displayed in the **Relation** field, this button displays the related faults. For example, if the current fault is a PARENT, clicking the **Show Relations** button displays the first child fault in the **Fault Edit** screen. If the current fault is a CHILD, clicking the **Show Relations** button displays the parent fault in the **Fault Edit** screen.
Print this Fault	Prints the fault details report for the displayed fault.

Display Buttons

The buttons in the Display section are:

Button	Use to...
Status	Opens the **Fault Status** screen in the context of the currently selected fault. See *Viewing and Assigning Fault Status* on page 55 for more information about fault status.
Links	Opens the **Fault Links** screen in the context of the currently selected fault. See *Viewing and Assigning Fault Links* on page 57 for more information about fault links.

Work Order Button

The button in the Work Order section is:

Button	Use to...
Create	Create a work order to organize further work on this fault.

Trouble Ticket Buttons

The buttons in the **Trouble Ticket** section are:

Button	Use to...
Create	Open the **Trouble Tickets** screen where a new trouble ticket can be created. See *Creating Trouble Tickets For Faults* on page 54 for more information about creating trouble tickets.
View	Open the **Trouble Ticket** screen in the context of the selected fault and view all the trouble tickets that are created for the displayed fault. See *Viewing Trouble Tickets* on page 53 for more information about viewing trouble tickets.

Fault Comments

Use the Fault Comments section to enter comments for the displayed fault record.

Fields

The fields in the Fault Comments section are:

Field	Description
Line	Sequential line number.
Entered	Date and Time the comments were entered. This is a read only field. It is auto populated.
Entered By	Name of the user that entered the comments. This is a read only field. It is auto populated.
Text	Free text area for comments.

✓ Note

When a fault is linked to any entity, a comment is automatically generated indicating the new link. See Viewing and Assigning Fault Links on page 57 for more information about linking faults.

Button

The button in the Fault Comments section is:

Button	Use to...
All Comments	Displays all the comments for the fault in a separate window.

⊙ Hint

*The **Fault Edit** screen allows read/write access to multiple workgroups. Ensure that the multiple user names have been created in the Clarity Corporate Manager module.*

✓ Note

*When you display the **Impacts** screen for a parent fault, for all children of that fault the **Chosen** option is checked. You cannot update the **Chosen** options. To select the entities for creation of child faults, check the **Select** options.*

Trouble Ticket Number

Use this section to specify the trouble ticket details.

Fields

The fields in the Trouble Ticket Number section are:

Field	Description
Trouble Ticket Number	Unique trouble ticket identification number. This is system generated.
Fault Number	Fault number associated with the trouble ticket.
Description	Free text field for a description of the trouble ticket.
Type	Network element type.
Location	Network element location. This is auto populated based on the selected network element type.
Index	Network element instance. This is auto populated based on the selected network element type.
Card	Card in the context of the selected network element.
Employee	Name of the employee that is currently logged into the Clarity system. This field is auto populated.

Field	Description
Work Group	The name of the **work group** the trouble ticket is assigned to.
Created	The **date** and **time** the trouble ticket is created. Field is auto populated.
Repaired	The date and time the problem is **fixed** and the trouble ticket closed.
Resolution	Description of the solution used to resolve the problem.

Trouble Ticket Comments

Use the Trouble Ticket Comments section to enter additional comments that you want to add for the trouble ticket record.

Figure 6–3. *Trouble Ticket Comments section in the Trouble Tickets screen*

Fields

The fields in the Trouble Ticket Comments section are described:

Field	Description
Line	Sequence number for trouble ticket comments.
Entered	Date and time the trouble ticket comments were entered. This field cannot be updated after the record is saved to the database.
Text	Free text field for trouble ticket comments. Text wrapping in comments enabled. The text field can capture a maximum of 1000 characters.

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Fields

The fields in the **Alarm Types** screen are:

Field	Description
Abbreviation	Short name used for an alarm. This field cannot be updated.
Description	Full description of the above abbreviation. (Mandatory)
Severity	Indicator of potential damage to the network and urgency of attention that is required. Select a value from the drop-down menu, which includes: • **OK** • **Critical** • **Degraded** • **Information** • **Indeterminate** • **Major** • **Minor** • **Threatened** This field is mandatory.
Priority	Indicates the priority based on the alarm type and severity. This is an arbitrary value determined by the user. Refer to internal policies and procedures for more information.

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Alarm Typing

Use the **Alarm Typing** screen to cross reference alarm types with network elements and provide a knowledge base of resolutions.
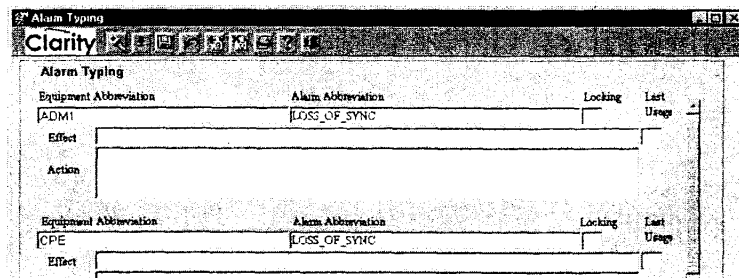
✅ **Note**

*Values in the **Alarm Types** and **Equipment Types** reference screens need to be already set up.*

To open the Alarm Typing screen

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* In the **Alarms Menu**, point to **Reference Screens**, and then click **Alarm Typing**.

Fields

The fields in the **Alarm Typing** screen are:

Field	Description
Equipment Abbreviation	Unique abbreviation for a network element type. (Mandatory)
Alarm Abbreviation	Any valid alarm type. (Mandatory)
Locking	This is a flag that indicates if an alarm or event needs to be manually cleared. Enter **Y** if the alarm in this context needs to be manually cleared. Enter **N** if the alarm is automatically cleared.
Effect	Indicates the most likely effect the alarm will have on the network.
Action	Current recommended action to be taken when this alarm occurs for this type of network element.
Last Usage	Use this flag to indicate if the recommended action worked on last usage. Enter **Y** if the action works. Enter **N** if the action did not work.
	Note: This field is based on the assumption that the user entering the flag does not have the authority to change the recommended action and is a means of flagging the system administrator of a potential update to procedures.

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