



*Organization for the Advancement  
of Structured Information Standards*

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# **eXtensible Customer Relationships Language (xCRL) Specifications and Description Document**

## CHANGE HISTORY

<b>Status</b>	<b>Version</b>	<b>Date</b>	<b>Author</b>	<b>Summary of Changes</b>
Draft	1.0	20 November 2001	CIQ-TC	Initial Draft – from CRML Specs V1.0 from MSI

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## **1.0 Acknowledgements**

OASIS wishes to acknowledge MSI Business Solutions Pty. Ltd (formerly known as MasterSoft International/Research Pty. Ltd), Australia for initiating this standards work to OASIS by submitting its XML standards Customer Relationships called Customer Relationship Markup Language (CRML). MSI has transferred this standard to OASIS for adoption as an industry standard. MSI Business Solutions has played a significant role in setting up the OASIS CIQ TC and has in the past submitted two of its XML Standards namely, Name and Address Markup Language (NAML) and Customer Information Markup Language (CIML) to OASIS for adoption as industry standards. OASIS appreciates the efforts of MSI in pushing open standards for customer information management.

### 2.0 Introduction

Customer relationship management is the key to build effective customer relationships. Customer relationships could be categorised into the following:

- Organisation to Organisation relationship
- Organisation to Person relationship, and
- Person to Person relationship

A standard way to represent customer relationship helps to achieve interoperability between different systems, processes and platforms. There are no standards for representing customer relationship and hence, this project attempts to define a standard in XML to capture and represent such relationships.

Following are some of the customer relationships that are covered by this standard.

### 2.1 Contact Management

Examples of Contact Management could be, a person maintaining a list of personal contacts, an account manager of an organization maintaining a list of potential and or existing business contacts, a list management service provider maintaining a list of customers subscribed to their services, etc.

### 2.2 Person to Person Relationship

Some examples of Person to Person relationships are:

- Mrs Mary Johnson and Mr.Patrick Johnson, where Mary is the wife of Patrick and Patrick is the husband of Mary
- Mrs Mary Johnson and Mr.Patrick Johnson “IN TRUST FOR” Mr.Nick Johnson, where Mary and Patrick are the trustees of Nick and Nick is the beneficiary.
- Mrs. Mary Johnson, Care of Mr.Patrick Johnson, where Mary is dependent on Patrick.

### 2.3 Person to Organisation Relationship

Some examples of Person to Organisation relationship are:

- Mrs. Mary Johnson and Mr.Patrick Johnson “DOING BUSINESS AS” Johnson & Associates, where Mary and Patrick are persons who are jointly doing a business under the name of a company called Johnson & Associates.
- Mr.Ram Kumar, Care of MSI Business Solutions Pty. Ltd, where Ram is the person and MSI Business Solutions is the company.

### 2.4 Organisation to Organisation Relationship

Some examples of Organisation to Organisation relationship are as follows:

- Company A is the subsidiary of Company B
- Company A is the parent of Company B
- Company A, Company B and Company C are the subsidiary companies of Company D

### 3.0 XML implementation

Data in an XML document is specified as either elements or as attributes of elements. What attributes an element has and which other elements it may contain is specified in a Document Type Definition (DTD). This DTD is delivered as a separate file that has the filename extension ".dtd". The data file that contains the addresses refers to this separate file.

The following rules were used to decide which data should be encoded as an XML element and which as an XML attribute:

1. All data (basic address elements, eg. street number, premise name, post code, etc) that is displayed or printed (on an address label) should be encoded as element (content) with the exception of separators/punctuation marks in the data (explained in point 3 below).
2. Data that will not be displayed, but instead tells what the meaning is of the element content should be encoded as element attributes. In practice, this means most of the "types", such as LocalityType, NameType, etc.
3. Data such as separators that may or may not be displayed shall be defined as attributes. Eg. "/" in 12/14, #in APT # 12, etc. This is important as the meaning of the separators such as punctuation marks in address data means different things for different countries. For example, a number range "12-14" in Australia this may indicate "12 to 14". In The Netherlands, this is more likely to mean '12 Flat 14', and '12 to 14' is more likely to be written '12 t/m 14'. The punctuation mark is therefore essential to ensure deliverability. Because of these differences the punctuation marks are data (and cannot be made dependent on being output as a standard by an application) and they need to be stored.

### 4.0 XML Tagging Conventions

We have extracted the XML tagging guidelines from the Open Travel Association Group (OTA) and from the ebXML as the basis for tagging xAL definitions with some changes to them.

#### 4.1 Guidelines for tag naming conventions

A key part of the XML grammar is consistent naming conventions for tags that represent the infrastructure and business-related elements. Tag name writers MUST follow these rules unless business requirements require other naming conventions.

- Use mixed case tag names, with the leading character of each word in upper case and the remainder in lower case.  
Example: <PostalCode>

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- Acronyms are discouraged, but where needed, use all upper case.  
Example: <UserID>
- Illegal characters cannot be used (e.g.: forward slash, etc.). Recommended characters in a tag name are basically limited to letters and underscores.  
Example: (not allowed) <Date/Time>
- The use of periods to indicate the version and hierarchy, is discouraged.

Tag writers SHOULD use these guidelines when constructing tag names.

- Use the same tag names with elements in a similar child structure  
Example: <ContactAddress>  
          <HomeAddress>  
          <WorkAddress>
- Use plural tag names only for collections.  
Example: <CreditCards>  
          <CreditCard>
- Element and attribute name size have no limitation. The names must be meaningful.  
Example: <CustomerRelationshipInformation>

Element and attribute names should incorporate the proposed list of suffixes for tag names as recommended by ebXML. The ebXML Data Element Representation Classes are the following (includes ebXML definition):

Amount - A number of monetary units specified in a currency where the unit of currency is explicit or it may be implied.

Code - A character string that represents a member of a set of values.

Boolean - An enumerated list of two, and only two, values which indicates a Condition such as on/off; true/false etc. (It was the general consensus to use 'Flag' as a term to indicate a Boolean value.)

Date - A day within a particular calendar year. Note: Reference ISO 8601.

Time - The time within any day in public use locally, independent of a particular day.  
Reference ISO 8601:1988.

DateTime - A particular point in the progression of time. Note: This may incorporate dependent on the level of precision, the concept of date.

Identifier - (standard abbreviation Id, meaning a unique identifier) A character string used to identify and distinguish uniquely, one instance of an object within an identification scheme.

Name - A word or phrase that constitutes the distinctive designation of a person, object, place, event, concept etc.

Quantity - A number of non-monetary units. It is normally associated with a unit of measure.

Number - A numeric value which is often used to imply a sequence or a member of a series.

Rate - A ratio of two measures.

Text - A character string generally in the form of words.

Measure - A numeric value that is always associated with a unit of measure.

### **5.0 extensible Customer Relationship Language (xCRL)**

With the advent of XML as a defacto standard for representing data, OASIS has developed an application independent XML standard for Customer Relationships called extensible Customer Relationships Language (xCRL). This xCRL language is directly adopted from Customer Relationships Markup Language (CRML) developed by MSI Business Solutions Pty. Ltd.

### **6.0 The Objective**

The objective of this document is to describe xCRL DTD Vocabulary in detail.

### **7.0 Pre-requisite**

Given that xCRL uses xCIL DTD as its major component, it is important that the reader has a good understanding of xNAL and xCIL, the OASIS standards (<http://www.oasis-open.org/committees/ciq>)

### **8.0 xCRL Grammar**

The following sections define the xCRL grammar in detail.

The figure below shows the complete DTD Grammar for xCRL:





## 8.1 xCRL Element



xCRL is the root element that contains all elements to define customer relationships in detail. xCRL consists of a sub-element called RelationshipRecord that must occur at least once. Xcrl container can have multiple Customer elements

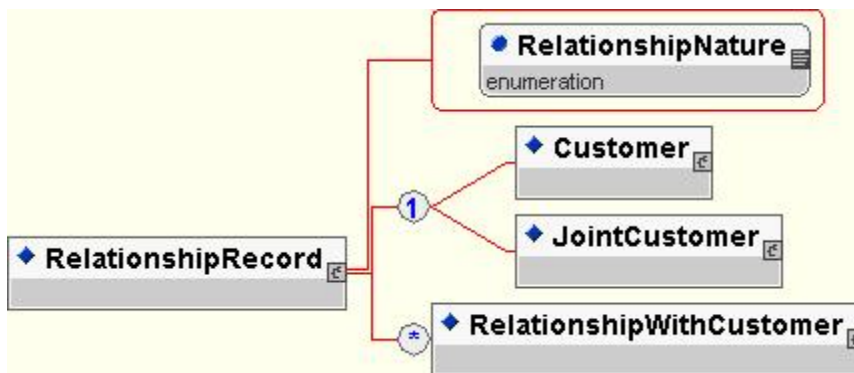
Example:

```
<xCRL>
  <RelationshipRecord>
    .....
    .....
  </RelationshipRecord >
  <RelationshipRecord >
    .....
    .....
  </RelationshipRecord >
</xCRL>
```

## 8.2 RelationshipRecord Element

The “RelationshipRecord” element defines the customers involved in the relationship. It provides sub-elements that can be used to define the relationship. The “RelationshipRecord” element has the following sub-elements and their relationship is (as shown in the figure):

((Customer OR JointCustomer), RelationshipWithCustomer\*)



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Values in “bold” under XML Tags column indicate that the element has sub-elements.

xCRL Elements	XML Tags	Description
A person or organisation	<b>RelationshipRecord</b>	This is the sub-element of root element “xCRL”. This element can occur multiple times and it is mandatory that it occurs at least once (1 or more). Has an attribute: <i>RelationshipNature</i> : Defines the nature of relationship the customer has with the other customer. Takes values “Business” or “Personal, or “PersonalAndBusiness”. This attribute is mandatory.
Description of a customer	<b>Customer</b>	A sub-element of “RelationshipRecord” element that helps to describe the details of a customer in greater detail such as name, address, etc. using its sub-elements. If the customer is sole and not in joint names, then this element is used. This element can occur once and is mandatory. Has attributes: <i>RelationshipWithJointCustomerType</i> : Defines the relationship this customer has with his/her/its joint relationship if there is one. This is optional. Eg. HUSBAND, WIFE, PARENT COMPANY, etc. <i>RelationshipWithCustomerType</i> : Defines the relationship this customer has with the other customer in question. This attribute is optional. Eg. HUSBAND, WIFE, TRUSTEE, BENEFICIARY, FRIEND, etc. Go to section “Customer Element” for more details.
Description of Joint customer	<b>JointCustomer</b>	A sub-element of “RelationshipRecord” element that helps to define the joint names of customers in detail. This element can occur once and is mandatory. If the customer is joint, then this element is used. Has attributes: <i>Connector</i> : Defines the connector used between two customers and is optional. For example, AND, & <i>JointAddress</i> : Defines whether the address is common for the customers and takes two values “yes” or “no”. <i>RelationshipWithCustomerType</i> : Defines the relationship this customer has with the other customer in question. This attribute is optional. Eg. HUSBAND, WIFE, TRUSTEE, BENEFICIARY, FRIEND, etc. Go to “JointCustomer Element” section for more details. See example for JointCustomer in the section below
Relationship with the other customer	<b>RelationshipWithCustomer</b>	A sub-element of “RelationshipRecord” element that helps to define the person or organization (customer) the customer is in relationship with. This element has sub-elements to define the relationship in detail. Has attributes: <i>RelationshipType</i> : Defines the type of relationship established and it can take only three values namely, “person-person”, “person-organisation”, Business-Business”, “Person-Business” and “organization-organisation”. This attribute is compulsory. <i>RelationshipTitle</i> : Defines the formal relationship the customer has with the other customer in question. This attribute is optional. Eg. “IN TRUST FOR”, “DOING BUSINESS AS”. “TRADING AS”, etc. <i>RelationshipNature</i> : Defines the nature of relationship the customer has with the other customer. This attribute is mandatory. Eg. HUSBAND, WIFE, TRUSTEE, BENEFICIARY, etc. <i>ContactID</i> : Defines the unique ID of a customer and is optional.

xCRL Elements	XML Tags	Description
		Go to section "RelationshipWithCustomer Element" for more detail.

### 8.2.1 Example for JointCustomer Element

*Mrs. Mary Johnson and Mr. Patrick Johnson  
23 Archer Street, Chatswood, NSW 2067*

```
<RelationshipRecord RelationshipNature="Personal">
  <JointCustomer Connector="and"
    CommonAddress="yes">
    <Customer RelationshipWithJointCustomerType="WIFE">
      <xCIL>
        <Record>
          <xNL>
            <NameDetails CustomerType="Person">
              <Name>Mrs.Mary Johnson</Name>
            </NameDetails>
          </xNL>
          <xAL>
            <AddressDetails>
              <Address>23 Archer Street, Chatswood, NSW 2067</Address>
            </AddressDetails>
          </xAL>
        </Record>
      </xCIL>
    </Customer>

    <Customer RelationshipWithJointCustomerType="HUSBAND">
      <xCIL>
        <Record>
          <xNL>
            <NameDetails CustomerType="Person">
              <Name>Mr.Patrick Johnson</Name>
            </NameDetails>
          </xNL>
        </Record>
      </xCIL>
    </Customer>
  </JointCustomer>
</RelationshipRecord>
```

### 8.3 Customer Element

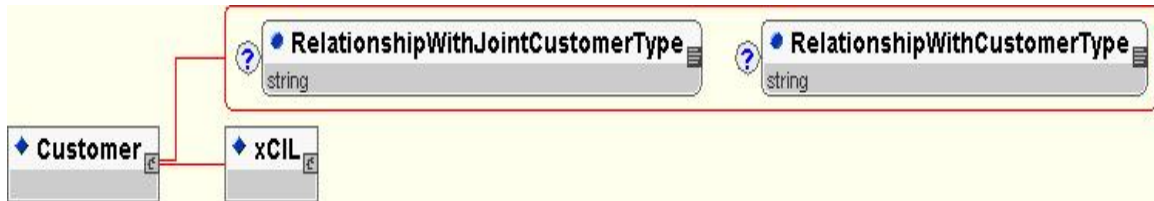
The "Customer" element defines each customer in detail. This customer can be used to define the customer and the customer in relationship with. Customers could be joint customers also. For example,

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Customer X and Customer Y “TRADING AS” Customer A and Customer B (OR)  
 Customer X and Customer Y (OR)  
 Customer X in relationship with Customer Y

The “Customer” element has the following sub-elements and their relationship is (as shown in the figure):

(xCIL)



Values in “bold” under XML Tags column indicate that the element has sub-elements.

xCRL Elements	XML Tags	Description
Customer	<b>Customer</b>	A sub-element of “RelationshipRecord” element that helps to define the details of customer(s) in detail by using its sub-elements. This element can occur more than once and is mandatory. Has attributes: <i>RelationshipWithJointCustomerType</i> : Defines the relationship this customer has with his/her/its joint relationship if there is one. This is optional. Eg. HUSBAND, WIFE, PARENT COMPANY, etc. <i>RelationshipWithCustomerType</i> : Defines the relationship this customer has with the other customer in question. This attribute is optional. Eg. HUSBAND, WIFE, TRUSTEE, BENEFICIARY, FRIEND, etc. See section below for an example of customer element.
Details about the customer	<b>xCIL</b>	A sub-element of “Customer” element that helps to define the details about each individual customers involved in the joint relationship. This element can occur once and is mandatory . <i>xCIL standard (vocabulary) is referenced here.</i>

### 8.3.1 Example of Customer Element

**Ram V. Kumar**  
**C/o PrivacyLink Pty. Ltd**  
**CONTACTS:**

**1. 123456**  
**Mr. Albert Einstein**  
**C/O PrivacyLink Pty. Ltd**  
**EGIS Building**

*Level 12, 67 Archert Street  
Chatswood, NSW 2067, Australia  
Phone: 61-2-94338765(Business)  
Fax: 61-2-94338000(Business)  
Email: albert@pl.com.au (Business)  
albert@albert.com.au (Personal)  
Last Contact: 22 April 2001  
Last Update: 22 April 2001*

```
<RelationshipRecord RelationshipNature="Business">
<Customer RelationshipWithCustomerType="CONTACT">
<xCIL>
<Record>
<xNL>
  <NameDetails CustomerType="Person">
    <PersonName>
      <Title>Mr</Title>
      <FirstName NameType="GivenName">Ram</FirstName>
      <MiddleName Type="Initial">V</MiddleName>
      <LastName NameType="SurName">Kumar</LastName>
    </PersonName>
    <DependencyNameDetails DependencyType="C/o">
      <NameDetails CustomerType="Organisation">
        <OrganisationName Type="Pty. Ltd">
          PrivacyLink
        </OrganisationName>
      </NameDetails>
    </DependencyNameDetails>
  </NameDetails>
</xNL>
</Record>
</xCIL>
</Customer>

<RelationshipWithCustomer RelationshipType="Person-Person"
RelationshipNature="BUSINESS CONTACT"
ContactID="1">

<Customer>
<xCIL>
<Record>
<CustomerID>123456</CustomerID>
<xNL>
  <NameDetails CustomerType="Person">
    <PersonName>
      <Title>Mr</Title>
      <FirstName NameType="GivenName">Albert</FirstName>
      <LastName NameType="SurName">Einstein</LastName>
    </PersonName>
    <DependencyNameDetails DependencyType="C/O">
      <NameDetails CustomerType="Organisation">
```

```
<OrganisationName Type="Proprietary Limited">
  PrivacyLink
</OrganisationName>
</NameDetails>
</DependencyNameDetails>
</NameDetails>
</xNL>
<xAL>
  <AddressDetails>

</xAL>
<PersonInfo>
  <TelephoneInfo>
    <TelephoneDetails Type="Business"
      CallingHours="BH">
      <CountryCode>61</CountryCode>
      <AreaCode>2</AreaCode>
      <Number>94338765</Number>
    </TelephoneDetails>
  </TelephoneInfo>
  <FaxInfo>
    <FaxDetails Type="Business">
      <CountryCode>61</CountryCode>
      <AreaCode>2</AreaCode>
      <Number>94338000</Number>
    </FaxDetails>
  </FaxInfo>
  <EmailInfo>
    <Email Type="Business">albert@pl.com.au</Email>
    <Email Type="Personal">albert@albert.com.au</Email>
  </EmailInfo>
</PersonInfo>
  </Record>
</xCIL>
</Customer>
  <ContactHistory>
    <ContactDetails>
      <ContactDate>
        <Day>22</Day>
        <Month>April</Month>
        <Year>2001</Year>
      </ContactDate>
      <ContactTime Type="HOURS">13:00</ContactTime>
    </ContactDetails>
  </ContactHistory>
  <UpdateHistory>
    <LastUpdateDetails>
      <UpdateDate>
        <Date>22 April 2001</Date>
      </UpdateDate>
```

```

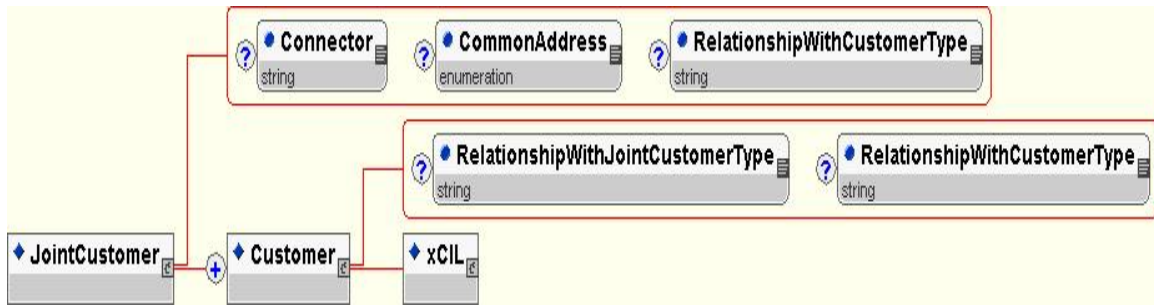
</LastUpdateDetails>
</UpdateHistory>
</RelationshipWithCustomer>
    
```

### 8.4 JointCustomer Element

The “JointCustomer” element defines the details of more than one customer involved as a joint partners having a relationship with other customer.

For example, in Mrs.Mary Johnson and Mr.Patrick Johnson ITF Mr.John Johnson, Mrs.Mary Johnson and Mr.Patrick Johnson are in joint relationship having a relationship with Patrick Johnson. This element provides sub-elements that can be used to define the relationship. The “JointCustomerDetails” element has the following sub-elements and their relationship is (as shown in the figure):

(Customer+)



Values in “bold” under XML Tags column indicate that the element has sub-elements.

xCRL Elements	XML Tags	Description
Description of Joint customer	<b>JointCustomer</b>	A sub-element of “RelationshipRecord” element that helps to define the joint names of customers in detail. This element can occur once and is mandatory. If the customer is joint, then this element is used. Has attributes: <i>Connector</i> : Defines the connector used between two customers and is optional. For example, AND, & <i>JointAddress</i> : Defines whether the address is common for the customers and takes two values “yes” or “no”. <i>RelationshipWithCustomerType</i> : Defines the relationship this customer has with the other customer in question. This attribute is optional. Eg. HUSBAND, WIFE, TRUSTEE, BENEFICIARY, FRIEND, etc. Go to “JointCustomer Element” section for more details. See example for JointCustomer in the section below
Customer	<b>Customer</b>	A sub-element of “RelationshipRecord” element that helps to define the details of customer(s) in detail by using its sub-elements. This element can occur more than once and is mandatory. Has attributes: <i>RelationshipWithJointCustomerType</i> : Defines the relationship this customer has with his/her/its joint relationship if there is one. This is optional. Eg. HUSBAND, WIFE, PARENT COMPANY, etc.



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xCRL Elements	XML Tags	Description
		<i>RelationshipWithCustomerType</i> : Defines the relationship this customer has with the other customer in question. This attribute is optional. Eg. HUSBAND, WIFE, TRUSTEE, BENEFICIARY, FRIEND, etc. For more details about the “Customer” element, see section “Customer Element”.

### 8.4.1 Example for JointCustomerDetails Element

*Mrs.Mary Johnson & Mr.Patrick Johnson*  
*PO Box: 123, Chatswood, NSW 2067*  
*"IN TRUST FOR"*  
*Mr.John Johnson*  
*14 St.Johns Crescent, St.Mary's, NSW 2760*

```
RelationshipRecord RelationshipNature="Business">
  <JointCustomer Connector="and"
    CommonAddress="yes"
    RelationshipWithCustomerType="TRUSTEES">
    <Customer RelationshipWithJointCustomerType="WIFE">
    <xCIL>
    <Record>
    <xNL>
    <NameDetails CustomerType="Person">
    <Name>Mrs.Mary Johnson</Name>
    </NameDetails>
    </xNL>
    <xAL>
    <AddressDetails>
    <Address>PO Box:123, Chatswood, NSW 2067</Address>
    </AddressDetails>
    </xAL>
    </Record>
    </xCIL>
    </Customer>

    <Customer RelationshipWithJointCustomerType="HUSBAND">
    <xCIL>
    <Record>
    <xNL>
    <NameDetails CustomerType="Person">
    <Name>Mr.Patrick Johnson</Name>
    </NameDetails>
    </xNL>
    </Record>
    </xCIL>
    </Customer>
```

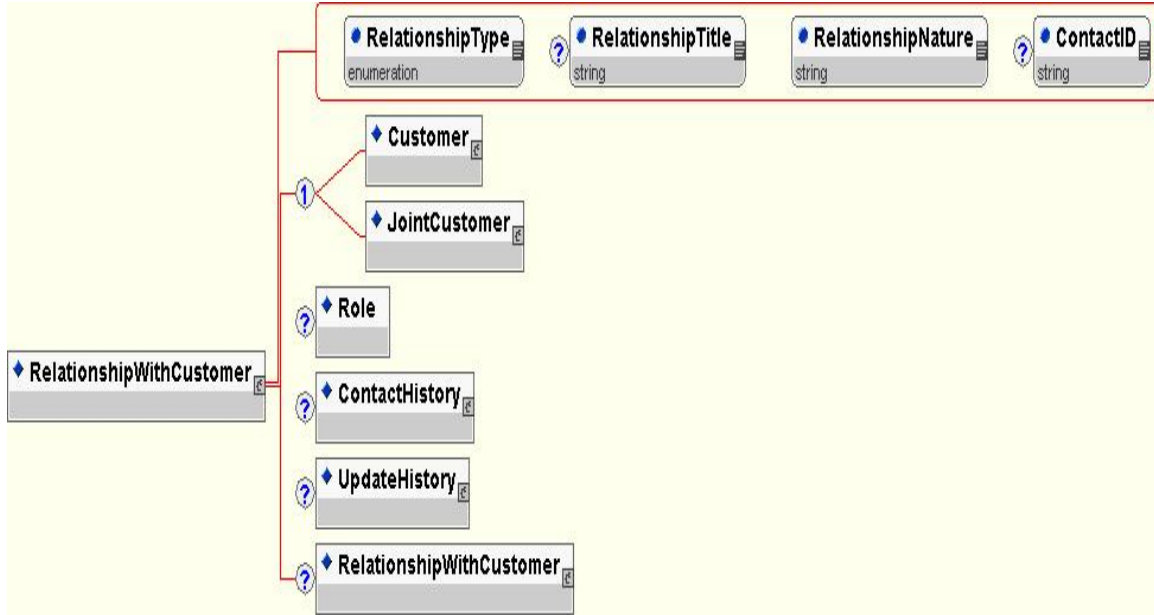
```
</JointCustomer>

<RelationshipWithCustomer RelationshipType="Person-Person"
                        RelationshipTitle="IN TRUST FOR"
                        RelationshipNature="BENEFICIARY">
    <Customer>
        <xCIL>
            <Record>
                <xNL>
                    <NameDetails CustomerType="Person">
                        <Name>Mr.John Johnson</Name>
                    </NameDetails>
                </xNL>
                <xAL>
                    <AddressDetails>
                        <Address>14 St.Johns Crescent, St.Mary's, NSW 2760</Address>
                    </AddressDetails>
                </xAL>
            </Record>
        </xCIL>
    </Customer>
</RelationshipWithCustomer>
</RelationshipRecord>
```

### 8.5 RelationshipWithCustomer Element

The “RelationshipWithCustomer” element defines the details of the customer that the relationship is with in detail. The “RelationshipWithCustomer” element has the following sub-elements and their relationship is (as shown in the figure):

((Customer **OR** JointCustomer), Role?, ContactHistory?, UpdateHistory?, RelationshipWithCustomer?)



Values in “bold” under XML Tags column indicate that the element has sub-elements.

xCRL Elements	XML Tags	Description
Relationship with the other customer	<b>RelationshipWithCustomer</b>	A sub-element of “RelationshipRecord” element that helps to define the person or organization (customer) the customer is in relationship with. This element has sub-elements to define the relationship in detail. Has attributes: <i>RelationshipType</i> : Defines the type of relationship established and it can take only three values namely, “person-person”, “person-organisation”, Business-Business”, “Person-Business” and “organization-organisation”. This attribute is compulsory. <i>RelationshipTitle</i> : Defines the formal relationship the customer has with the other customer in question. This attribute is optional. Eg. “IN TRUST FOR”, “DOING BUSINESS AS”, “TRADING AS”, etc. <i>RelationshipNature</i> : Defines the nature of relationship the customer has with the other customer. This attribute is mandatory. Eg. HUSBAND, WIFE, TRUSTEE, BENEFICIARY, etc. <i>ContactID</i> : Defines the unique ID of a customer and is optional. See section below for an example on “RelationshipWithCustomer Element”.
Customer	<b>Customer</b>	A sub-element of “RelationshipRecord” element that helps to define the details of customer(s) in detail by using its sub-elements. This element can occur more than once and is mandatory. Has attributes: <i>RelationshipWithJointCustomerType</i> : Defines the relationship this customer has with his/her/its joint relationship if there is one. This is optional. Eg. HUSBAND, WIFE, PARENT COMPANY, etc. <i>RelationshipWithCustomerType</i> : Defines the relationship this customer has with the other customer in question. This attribute is optional. Eg. HUSBAND, WIFE, TRUSTEE, BENEFICIARY, FRIEND, etc. For more details about the “Customer” element, see section “Customer

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xCRL Elements	XML Tags	Description
		Element".
Description of Joint customer	<b>JointCustomer</b>	A sub-element of "RelationshipRecord" element that helps to define the joint names of customers in detail. This element can occur once and is mandatory. If the customer is joint, then this element is used. Has attributes: <i>Connector</i> : Defines the connector used between two customers and is optional. For example, AND, & <i>JointAddress</i> : Defines whether the address is common for the customers and takes two values "yes" or "no". <i>RelationshipWithCustomerType</i> : Defines the relationship this customer has with the other customer in question. This attribute is optional. Eg. HUSBAND, WIFE, TRUSTEE, BENEFICIARY, FRIEND, etc. Go to "JointCustomer Element" section for more details.
Role of the customer	<b>Role</b>	A sub-element of "RelationshipWithCustomer" element that defines the role of the customer (if the customer is a person) in the organisation. This can occur once and is optional. Eg. Decision maker, Influencer, etc.
Contact details with the customer	<b>ContactHistory</b>	A sub-element of "RelationshipWithCustomer" element that helps to define the contact details established with the customer over a period of time. Can occur once and is optional. See the section "ContactHistory Element" for further details about this element.
Update details about the customer	<b>UpdateHistory</b>	A sub-element of "RelationshipWithCustomer" element that helps to define the update details about the customer over a period of time. Can occur once and is optional. See the section "UpdateHistory Element" for further details about this element.
Relationship with the other customer	<b>RelationshipWithCustomer</b>	This element is used again because the relationship could be nested. For example Customer A could be doing business with Customer B who in turn could be doing business with Customer C. This element is optional.

### 8.5.1 Example of RelationshipWithCustomer Element

*Mrs. Mary Johnson*  
*PO Box:123, Chatswood, NSW 2067*  
**AND Mr.Patrick Johnson**  
*23 Archer Street, Chatswood, NSW 2067*  
**"IN TRUST FOR"**  
*Mr.John Johnson*  
*14 St.Johns Crescent, St.Mary's, NSW 2760*  
**"DOING BUSINESS AS"**  
**JOHNSON and WESSON Pty. Ltd**

```
<RelationshipRecord RelationshipNature="Business">
  <JointCustomer Connector="and"
    CommonAddress="no"
    RelationshipWithCustomerType="TRUSTEE">
    <Customer RelationshipWithJointCustomerType="FRIEND">
      <xCIL>
        <Record>
          <xNL>
            <NameDetails CustomerType="Person">
```

```
<Name>Mrs.Mary Johnson</Name>
</NameDetails>
</xNL>
<xAL>
  <AddressDetails>
    <Address>PO Box:123, Chatswood, NSW 2067</Address>
  </AddressDetails>
</xAL>
</Record>
</xCIL>
</Customer>
```

```
<Customer RelationshipWithJointCustomerType="FRIEND">
<xCIL>
  <Record>
    <xNL>
      <NameDetails CustomerType="Person">
        <Name>Mr.Patrick Johnson</Name>
      </NameDetails>
    </xNL>
    <xAL>
      <AddressDetails>
        <Address>23 Archer Street, Chatswood, NSW 2067</Address>
      </AddressDetails>
    </xAL>
  </Record>
</xCIL>
</Customer>
</JointCustomer>
```

```
<RelationshipWithCustomer RelationshipType="Person-Person"
                             RelationshipTitle="IN TRUST FOR"
                             RelationshipNature="BENEFICIARY">
```

```
  <Customer>
<xCIL>
  <Record>
    <xNL>
      <NameDetails CustomerType="Person">
        <Name>Mr.John Johnson</Name>
      </NameDetails>
    </xNL>
    <xAL>
      <AddressDetails>
        <Address>14 St.Johns Crescent, St.Mary's, NSW 2760</Address>
      </AddressDetails>
    </xAL>
  </Record>
</xCIL>
</Customer>
```

```
<RelationshipWithCustomer RelationshipType="Person-Organisation"
```

```

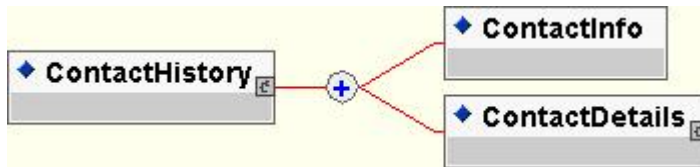
RelationshipTitle="DOING BUSINESS AS"
RelationshipNature="COMPANY">
  <Customer RelationshipWithCustomerType="COMPANY">
    <xCIL>
      <Record>
        <xNL>
          <NameDetails CustomerType="Organisation">
            <OrganisationName Type="Pty.Ltd">
              JOHNSON and WESSON
            </OrganisationName>
          </NameDetails>
        </xNL>
      </Record>
    </xCIL>
  </Customer>
</RelationshipWithCustomer>
</RelationshipWithCustomer>
</RelationshipRecord>

```

**8.6 ContactHistory Element**

The “ContactHistory” element defines and tracks the details of the contacts established with the customer over a period of time in detail. The “ContactHistory” element has the following sub-elements and their relationship is (as shown in the figure):

((ContactInfo **OR** ContactDetails)+)



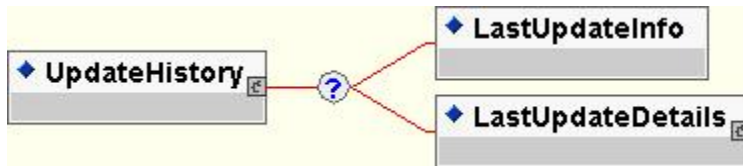
Values in “bold” under XML Tags column indicate that the element has sub-elements.

<b>xCRL Elements</b>	<b>XML Tags</b>	<b>Description</b>
Contact details	<b>ContactHistory</b>	A sub-element of “RelationshipWithCustomer” element that helps to define and track the contact details established with the customer over a period of time. Can occur once and is optional. Has sub-elements.
Contact details as a free format text	ContactInfo	A sub-element of “ContactHistory” element that helps to define the contact details as a free format text. Can occur more than once and is mandatory. <ContactInfo>23 August 2000 at 12:30pm</ContactInfo> <ContactInfo>24 August @1:30pm. Left a message with secretary</ContactInfo>
Contact details in a detailed level	<b>ContactDetails</b>	A sub-element of “ContactHistory” element that helps to define the contact details using sub-elements at a detailed level. Can occur more than once and is mandatory. See section “ContactDetails” element for more information.

### 8.7 UpdateHistory Element

The “UpdateHistory” element defines and tracks the details of the update done to the customer record over a period of time in detail. The “UpdateHistory” element has the following sub-elements and their relationship is (as shown in the figure):

((LastUpdateInfo **OR** LastUpdateDetails)?)



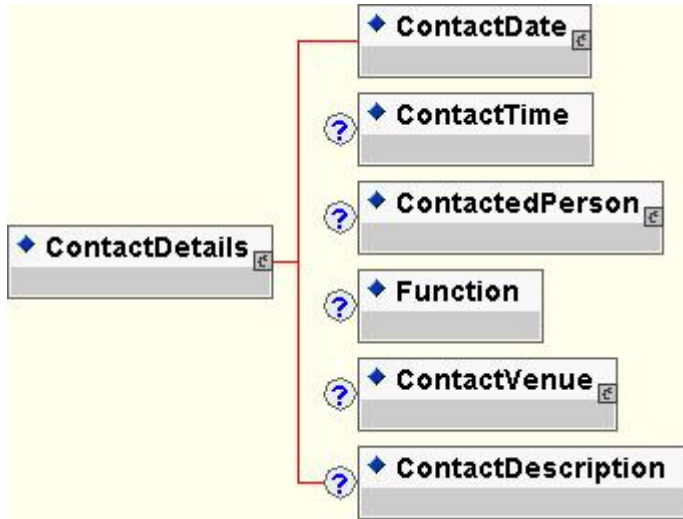
Values in “bold” under XML Tags column indicate that the element has sub-elements.

xCRL Elements	XML Tags	Description
Update details	<b>UpdateHistory</b>	A sub-element of “RelationshipWithCustomer” element that helps to define and track the update details done to the customer record over a period of time. Can occur once and is optional. Has sub-elements.
Update details as a free format text	LastUpdateInfo	A sub-element of “UpdateHistory” element that helps to define the update details as a free format text. Can occur more than once and is mandatory. <LastUpdateInfo>23 August 2000 at 12:30pm Changed Phone Number</LastUpdateInfo>
Update details in a detailed level	<b>LastUpdateDetails</b>	A sub-element of “UpdateHistory” element that helps to define the update details using sub-elements at a detailed level. Can occur more than once and is mandatory. See section “LastUpdateDetails” element for more information.

### 8.8 ContactDetails Element

The “ContactDetails” element defines and tracks the details of the contacts established with the customer over a period of time in detail. The “ContactDetails” element has the following sub-elements and their relationship is (as shown in the figure):

(ContactDate, ContactTime?, ContactedPerson?, Function?, ContactVenue?, ContactDescription?)



Values in “bold” under XML Tags column indicate that the element has sub-elements.

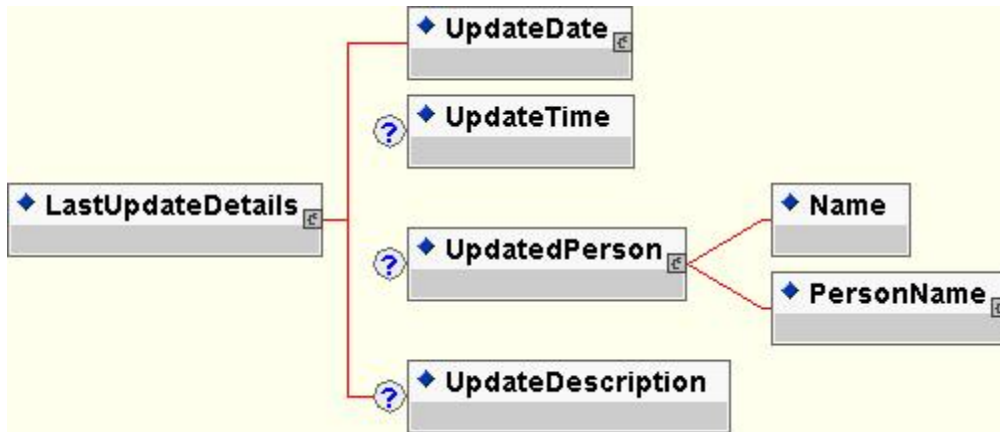
xCRL Elements	XML Tags	Description
Date of contact	<b>ContactDate</b>	A sub-element of “ContactDetails” element that helps to define the date details. Can occur once and is optional. Has sub-elements. See section “ContactDate Element” for more details.
Time of Contact	ContactTime	A sub-element of “ContactDetails” element that helps to define the time of contact. Can occur more than once and is optional. Has an attribute: <i>Type</i> : Defines the type and is optional. Can take values “HOURS”, or “AM” or “PM” and “HOURS” is the default.
Person Contacted	<b>ContactedPerson</b>	A sub-element of “ContactDetails” element that helps to define the name of the person contacted in detail. Can occur once and is optional. See section “ContactedPerson” element for more information.
Job description of the contacted person	Function	A sub-element of “ContactDetails” element that helps to define the job description of the contacted person on behalf of the customer. Can occur once and is optional.
Venue to meet/met in case of a face to face meeting	<b>ContactVenue</b>	A sub-element of “ContactDetails” element that defines the venue of meeting in detail if it is/was a face to face meeting with the customer. Can occur once and is optional. See section “ContactVenue” element for more information.
Description of the contact as a free format text	ContactDescription	A sub-element of “ContactDetails” element that defines the description of the contact as a free format text. Can occur once and is optional.

## 8.9 LastUpdateDetails Element

The “LastUpdateDetails” element defines and tracks the details of the update done on the customer record over a period of time in detail. The “LastUpdateDetails” element has the following sub-elements and their relationship is (as shown in the figure):

(UpdateDate, UpdateTime?, UpdatedPerson?, UpdateDescription?)





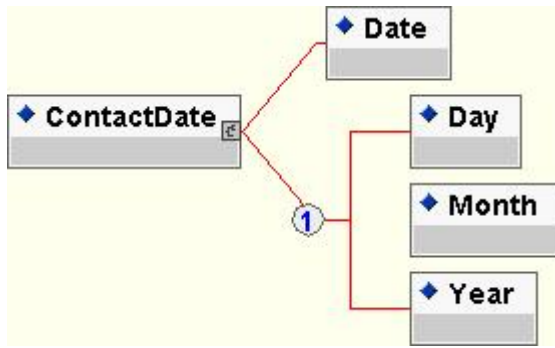
Values in “bold” under XML Tags column indicate that the element has sub-elements.

xCRL Elements	XML Tags	Description
Date of update	<b>UpdateDate</b>	A sub-element of “LastUpdateDetails” element that helps to define the date details of update. Can occur once and is mandatory. Has sub-elements. See section “UpdateDate Element” for more details.
Time of Update	UpdateTime	A sub-element of “LastUpdateDetails” element that helps to define the time of update. Can occur more than once and is optional. Has an attribute: <i>Type</i> : Defines the type and is optional. Can take values “HOURS”, or “AM” or “PM” and “HOURS” is the default.
Person who did the update	<b>UpdatedPerson</b>	A sub-element of “LastUpdateDetails” element that helps to define the name of the person who did the update, in detail. Can occur once and is optional. See section “ContactedPerson” element for more information.
Description of the update as a free format text	UpdateDescription	A sub-element of “LastUpdateDetails” element that defines the description of the contact as a free format text. Can occur once and is optional.

### 8.10 ContactDate

The “ContactDate” element defines the date of contact with the customer in detail using its sub-elements. The “ContactDate” element has the following sub-elements and their relationship is (as shown in the figure):

(Date **OR** (Day, Month, Year))

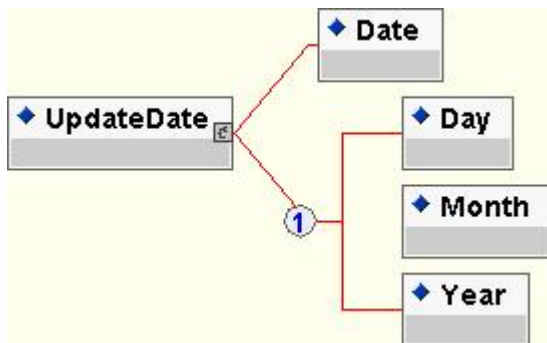


xCRL Elements	XML Tags	Description
Date (as a free format field)	Date	This is the sub-element of a “ContactDate” element. This element can occur once and it is mandatory. This element defines the Date as a general field
Day	Day	This is the sub-element of “ContactDate” element. This element can occur once and is mandatory. Defines the day of the date and is mandatory.
Month	Month	This is the sub-element of “ContactDate” element. This element can occur once and is mandatory. Defines the month of the date and is mandatory.
Year	Year	This is the sub-element of “ContactDate” element. This element can occur once and is mandatory. Defines the year of the date and is mandatory.

### 8.11 UpdatedDate

The “UpdatedDate” element defines the date of update of the customer record in detail using its sub-elements. The “UpdatedDate” element has the following sub-elements and their relationship is (as shown in the figure):

(Date OR (Day, Month, Year))



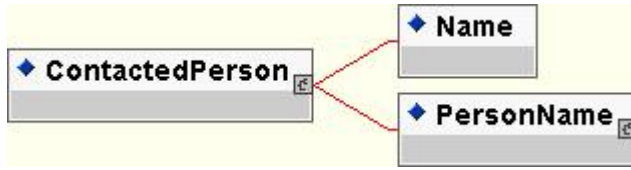
xCRL Elements	XML Tags	Description
Date (as a free format field)	Date	This is the sub-element of a “UpdatedDate” element. This element can occur once and it is mandatory. This element defines the Date as a general field
Day	Day	This is the sub-element of “UpdatedDate” element. This element can occur once and is mandatory. Defines the day of the date and is mandatory.
Month	Month	This is the sub-element of “UpdatedDate” element. This element can occur once and is mandatory. Defines the month of the date and is mandatory.

xCRL Elements	XML Tags	Description
Year	Year	This is the sub-element of “UpdatedDate” element. This element can occur once and is mandatory. Defines the year of the date and is mandatory.

### 8.12 ContactedPerson Element

The “ContactedPerson” element defines the details of the contacted person on behalf of the customer in detail. The “ContactedPerson” element has the following sub-elements and their relationship is (as shown in the figure):

(Name **OR** PersonName)

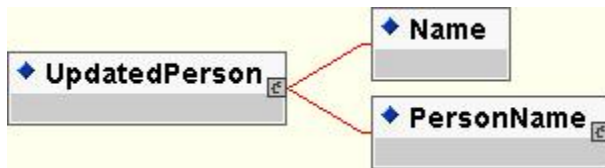


xCRL Elements	XML Tags	Description
Name of the person as a free format text	Name	This is the sub-element of “ContactedPerson” element. This element can occur once and it is mandatory. This element defines the name of the contacted person on behalf of the customer as a free format text.
Name of the person in detail	PersonName	This is the sub-element of “ContactedPerson” element. This element can occur once and is mandatory. Defines the name of the person contacted on behalf of the customer in detail using its sub-elements. <b>Uses xNL Vocabulary here.</b>

### 8.13 UpdatedPerson Element

The “UpdatedPerson” element defines the details of the person who updated the customer record, in detail. The “UpdatedPerson” element has the following sub-elements and their relationship is (as shown in the figure):

(Name **OR** PersonName)



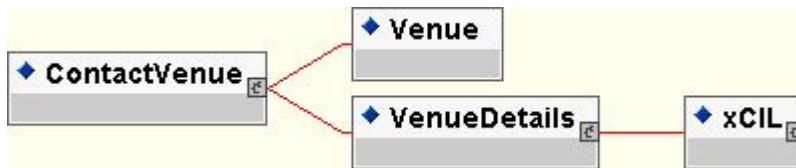
xCRL Elements	XML Tags	Description
Name of the person as a free format text	Name	This is the sub-element of “UpdatedPerson” element. This element can occur once and it is mandatory. This element defines the name of the person

xCRL Elements	XML Tags	Description
		who updated the customer record as a free format text.
Name of the person in detail	<b>PersonName</b>	This is the sub-element of “UpdatedPerson” element. This element can occur once and is mandatory. Defines the name of the person who updated the customer record in detail using its sub-elements. <b>Uses xNL Vocabulary here.</b>

### 8.14 ContactVenue Element

The “ContactVenue” element defines the details of the venue of contact, in detail. The “ContactVenue” element has the following sub-elements and their relationship is (as shown in the figure):

(Venue OR VenueDetails)



xCRL Elements	XML Tags	Description
Venue as a free format text	Venue	This is the sub-element of “ContactVenue” element. This element can occur once and it is mandatory. This element defines the details of the venue of the meeting with the customer as a free format text.
Details of the venue	<b>VenueDetails</b>	This is the sub-element of “ContactVenue” element. This element can occur once and is mandatory. This element defines the details of the venue of the meeting with the customer in detail using its sub-element xCIL. <b>XCIL vocabulary is referenced here.</b>

#### 8.14.1 Example of ContactHistory and UpdatedHistory Elements

**Ram V. Kumar**  
**C/o PrivacyLink Pty. Ltd**  
**CONTACTS:**

**1. 123456**  
**Mr. Albert Einstein**  
**C/O PrivacyLink Pty. Ltd**  
**EGIS Building**  
**Level 12, 67 Archert Street**  
**Chatswood, NSW 2067, Australia**  
**Phone: 61-2-94338765(Business)**  
**Fax: 61-2-94338000(Business)**  
**Email: albert@pl.com.au (Business)**  
**albert@albert.com.au (Personal)**  
**Last Contact: 22 April 2001**  
**Last Update: 22 April 2001**

**2. 123457**

**Mr. Rodney Freeman**

**C/O Jack Freedman**

**Postal Address (effective from Jan1. 2001):**

**PO Box: 773**

**Chatswood, NSW 2057**

**Residential Address:**

**Level 12, 67 Albert Avenue**

**Chatswood, NSW 2209, Australia**

**Old Residential Address (15 Sept. 1999 - 30 Dec. 1999):**

**SUITE 1A, LEVEL 2, BLOCK 2, RIPPON BUILDING**

**47 KINGSTON AVENUE NORTH, NORTH RYDE, NSW 2113, AUSTRALIA**

**Account Manager**

**Insurance Dept.**

**MasterSoft International**

**Tel: 02-94128333**

**Fax: 02-94134275**

**Email: msi@msi.com.au**

```
<RelationshipRecord RelationshipNature="Business">
  <Customer RelationshipWithCustomerType="CONTACT">
    <xCIL>
      <Record>
        <xNL>
          <NameDetails CustomerType="Person">
            <PersonName>
              <Title>Mr</Title>
              <FirstName NameType="GivenName">Ram</FirstName>
              <MiddleName Type="Initial">V</MiddleName>
              <LastName NameType="SurName">Kumar</LastName>
            </PersonName>
            <DependencyNameDetails DependencyType="C/o">
              <NameDetails CustomerType="Organisation">
                <OrganisationName Type="Pty. Ltd">
                  PrivacyLink
                </OrganisationName>
              </NameDetails>
            </DependencyNameDetails>
          </NameDetails>
        </xNL>
      </Record>
    </xCIL>
  </Customer>

  <RelationshipWithCustomer RelationshipType="Person-Person"
    RelationshipNature="BUSINESS CONTACT"
    ContactID="1">
    <Customer>
```

```
<xCIL>
  <Record>
    <CustomerID>123456</CustomerID>
    <xNL>
      <NameDetails CustomerType="Person">
        <PersonName>
          <Title>Mr</Title>
          <FirstName NameType="GivenName">Albert</FirstName>
          <LastName NameType="SurName">Einstein</LastName>
        </PersonName>
        <DependencyNameDetails DependencyType="C/O">
          <NameDetails CustomerType="Organisation">
            <OrganisationName Type="Proprietary Limited">
              PrivacyLink
            </OrganisationName>
          </NameDetails>
        </DependencyNameDetails>
      </NameDetails>
    </xNL>
    <xAL>
      <AddressDetails>

    </xAL>
    <PersonInfo>
      <TelephoneInfo>
        <TelephoneDetails Type="Business"
          CallingHours="BH">
          <CountryCode>61</CountryCode>
          <AreaCode>2</AreaCode>
          <Number>94338765</Number>
        </TelephoneDetails>
      </TelephoneInfo>
      <FaxInfo>
        <FaxDetails Type="Business">
          <CountryCode>61</CountryCode>
          <AreaCode>2</AreaCode>
          <Number>94338000</Number>
        </FaxDetails>
      </FaxInfo>
      <EmailInfo>
        <Email Type="Business">albert@pl.com.au</Email>
        <Email Type="Personal">albert@albert.com.au</Email>
      </EmailInfo>
    </PersonInfo>
  </Record>
</xCIL>
</Customer>
<ContactHistory>
  <ContactDetails>
  <ContactDate>
```

```
<Day>22</Day>
<Month>April</Month>
<Year>2001</Year>
</ContactDate>
<ContactTime Type="HOURS">13:00</ContactTime>
</ContactDetails>
</ContactHistory>
<UpdateHistory>
  <LastUpdateDetails>
    <UpdateDate>
      <Date>22 April 2001</Date>
    </UpdateDate>
  </LastUpdateDetails>
</UpdateHistory>
</RelationshipWithCustomer>

<RelationshipWithCustomer RelationshipType="Person-Person"
  RelationshipNature="BUSINESS CONTACT"
  ContactID="2">

  <Customer>
    <xCIL>
      <Record>
        <CustomerID>123457</CustomerID>
        <xNL>
          <NameDetails CustomerType="Person">
            <Name>Mr.Rodney Freeman</Name>
            <DependencyName>C/O Jack Freedman</DependencyName>
          </NameDetails>
        </xNL>
        <xAL>
          <AddressDetails
            AddressType="postal"
            CurrentStatus="valid"
            ValidFromDate="1 Jan 2000">
            <Address>
              PO Box: 773
              Chatswood, NSW 2057
            </Address>
          </AddressDetails>

          <AddressDetails AddressType="residential"
            CurrentStatus="living">
            <AddressLines>
              <AddressLine>Level 12, 67 Albert Avenue</AddressLine>
              <AddressLine>Chatswood</AddressLine>
              <AddressLine>NSW 2209</AddressLine>
              <AddressLine>Australia</AddressLine>
            </AddressLines>
          </AddressDetails>
```

```
<AddressDetails AddressType="residential"
    CurrentStatus="moved"
    ValidFromDate="15 September 1995"
    ValidToDate="30 December 1999">

</xAL>
<PersonInfo>
<OccupationInfo>
<OccupationDetails>
<Position>Account Manager</Position>
<Department>
<DepartmentName>Insurance</DepartmentName>
</Department>
<Organisation>
<Name>MasterSoft International</Name>
</Organisation>
</OccupationDetails>
</OccupationInfo>
<TelephoneInfo>
<Telephone>02-94128333</Telephone>
</TelephoneInfo>
<FaxInfo>
<Fax>02-94134175</Fax>
</FaxInfo>
<EmailInfo>
<Email>msi@msi.com.au</Email>
</EmailInfo>
</PersonInfo>
</Record>
</xCIL>
</Customer>
</RelationshipWithCustomer>
</RelationshipRecord>
```

## 9.0 Additional Examples

### 9.1 Example 1

*Richardson & Wrench Pty. Ltd*  
*PO Box: 123, Willoughby, NSW 2064*  
*"TRADING AS"*  
*Capital One Estate Pty. Ltd*  
*23 Capital Street, Sydney, NSW 2000*

```
<RelationshipRecord          RelationshipNature="Business">
<Customer                  RelationshipWithCustomerType="COMPANY">
<xCIL>
<Record>
```



## CRML Specifications and Description Document

---

```
<xNL>
  <NameDetails CustomerType="Organisation">
    <OrganisationName>Richardson and Wrench Pty. Ltd</OrganisationName>
  </NameDetails>
</xNL>
<xAL>
  <AddressDetails AddressType="Postal">
    <AdministrativeArea>
      <AdministrativeAreaName>NSW</AdministrativeAreaName>
    <Locality>
      <LocalityName>Willoughby</LocalityName>
    <PostBox Type="PO Box">
      <PostBoxNumber>123</PostBoxNumber>
    </PostBox>
    <PostalCode>
      <PostalCodeNumber>2064</PostalCodeNumber>
    </PostalCode>
    </Locality>
  </AdministrativeArea>
</AddressDetails>
</xAL>
</Record>
</xCIL>
</Customer>

<RelationshipWithCustomer RelationshipType="Organisation-Organisation"
  RelationshipTitle="TRADING AS"
  RelationshipNature="COMPANY">

  <Customer>
    <xCIL>
      <Record>
        <xNL>
          <NameDetails CustomerType="Organisation">
            <Name>Capital One Estate Pty. Ltd</Name>
          </NameDetails>
        </xNL>
        <xAL>
          <AddressDetails>
            <Address>23 Capital Street, Sydney, NSW 2000</Address>
          </AddressDetails>
        </xAL>
      </Record>
    </xCIL>
  </Customer>
</RelationshipWithCustomer>
</RelationshipRecord>
```

## 9.2 Example 2

*MasterSoft Research Pty. Ltd*

*PO Box: 773, Chatswood, NSW 2065*

*"SUBSIDIARY OF"*

*MSI Business Solutions Pty. Ltd*

*Level 12, 67 Archer Street, Chatswood, NSW 2067*

```
<RelationshipRecord RelationshipNature="Business">
  <Customer RelationshipWithCustomerType="SUBSIDIARY">
    <xCIL>
      <Record>
        <xNL>
          <NameDetails CustomerType="Organisation">
            <OrganisationName>MasterSoft Research Pty. Ltd</OrganisationName>
          </NameDetails>
        </xNL>
        <xAL>
          <AddressDetails AddressType="Postal">
            <AdministrativeArea>
              <AdministrativeAreaName>NSW</AdministrativeAreaName>
            </AdministrativeArea>
            <Locality>
              <LocalityName>Chatswood</LocalityName>
            </Locality>
            <PostBox Type="PO Box">
              <PostBoxNumber>773</PostBoxNumber>
            </PostBox>
            <PostalCode>
              <PostalCodeNumber>2057</PostalCodeNumber>
            </PostalCode>
          </AddressDetails>
        </xAL>
      </Record>
    </xCIL>
  </Customer>

  <RelationshipWithCustomer RelationshipType="Organisation-Organisation"
    RelationshipTitle="SUBSIDIARY-
PARENT"
    RelationshipNature="PARENT">
    <Customer>
      <xCIL>
        <Record>
          <xNL>
            <NameDetails CustomerType="Organisation">
              <OrganisationName Type="Pty.Ltd">
                MSI Business Solutions
              </OrganisationName>
            </NameDetails>
          </xNL>
        </Record>
      </xCIL>
    </Customer>
  </RelationshipWithCustomer>
</RelationshipRecord>
```

```
</NameDetails>
</xNL>
<xAL>
  <AddressDetails>
    <Country>
      <CountryName>Australia</CountryName>
    <AdministrativeArea>
      <AdministrativeAreaName>NSW</AdministrativeAreaName>
    <Locality>
      <LocalityName>Chatswood</LocalityName>
    <Thoroughfare>
      <ThoroughfareName>Archer Street</ThoroughfareName>
      <ThoroughfareNumber>67</ThoroughfareNumber>
    <Premise Type="Building">
      <SubPremise Type="LEVEL">
        <SubPremiseNumber>12</SubPremiseNumber>
      </SubPremise>
    </Premise>
  </Thoroughfare>
  <PostalCode>
    <PostalCodeNumber>2067</PostalCodeNumber>
  </PostalCode>
</Locality>
</AdministrativeArea>
</Country>
</AddressDetails>
</xAL>
</Record>
</xCIL>
</Customer>
</RelationshipWithCustomer>
</RelationshipRecord>
```

### 9.3 Example 3

#### *Cognito, Inc*

*Level 12, 67 Albert Avenue, Chatswood, NSW 2067*

#### **SUBSIDIARIES:**

#### *MasterSoft Research Pty. Ltd*

*Level 12, 67 Albert Avenue, Chatswood, NSW 2067*

#### *MSI Business Solutions Pty. Ltd*

*PO Box: 773, Chatswood, NSW 2057*

```
<RelationshipRecord RelationshipNature="Business">
  <Customer RelationshipWithCustomerType="PARENT">
    <xCIL>
      <Record>
        <xNL>
```

```
<NameDetails CustomerType="Organisation">
  <OrganisationName>Cognito, Inc</OrganisationName>
</NameDetails>
</xNL>
<xAL>
  <AddressDetails>
    <Address>Level 12, 67 Albert Avenue, Chatswood, NSW 2067</Address>
  </AddressDetails>
</xAL>
</Record>
</xCIL>
</Customer>

<RelationshipWithCustomer RelationshipType="Business-Business"
                          RelationshipTitle="PARENT-SUBSIDIARY"
                          RelationshipNature="SUBSIDIARY">
  <Customer RelationshipWithCustomerType="SUBSIDIARY">
    <xCIL>
      <Record>
        <xNL>
          <NameDetails CustomerType="Organisation">
            <OrganisationName Type="Pty.Ltd">
              MasterSoft Research
            </OrganisationName>
          </NameDetails>
        </xNL>
        <xAL>
          <AddressDetails>
            <Address>Level 12, 67 Albert Avenue, Chatswood, NSW 2067</Address>
          </AddressDetails>
        </xAL>
      </Record>
    </xCIL>
  </Customer>
</RelationshipWithCustomer>

<RelationshipWithCustomer RelationshipType="Business-Business"
                          RelationshipTitle="PARENT-SUBSIDIARY"
                          RelationshipNature="SUBSIDIARY">
  <Customer RelationshipWithCustomerType="SUBSIDIARY">
    <xCIL>
      <Record>
        <xNL>
          <NameDetails CustomerType="Organisation">
            <OrganisationName Type="Pty.Ltd">
              MSI Business Solutions
            </OrganisationName>
          </NameDetails>
        </xNL>
        <xAL>
```

```
<AddressDetails>
  <Address>PO Box: 773, Chatswood, NSW 2057, Australia</Address>
</AddressDetails>
</xAL>
</Record>
</xCIL>
</Customer>
</RelationshipWithCustomer>
</RelationshipRecord>
```

## 10.0 References

- Name and Address Markup Language (NAML) Specifications document (Version 1-1.3), MasterSoft International, April 2000
- Global Address Specifications document (Version 1-1.2), December 2000
- xNL: Specifications and Description Document, OASIS CIQ TC, <http://www.oasis-open.org/committees/ciq>
- xAL: Specifications and Description Document, OASIS CIQ TC, <http://www.oasis-open.org/committees/ciq>
- Ram Kumar, XML Standards for Customer Information Quality Management, XML Journal, Vol.1, No.2, July 2000, pp.41-45.
- xCIL: Specifications and Description Document, OASIS CIQ TC, <http://www.oasis-open.org/committees/ciq>
- xNAL: Specifications and Description Document, OASIS CIQ TC, <http://www.oasis-open.org/committees/ciq>
- CRML: Specifications and Description Document, MSI Business Solutions Pty. Ltd, November 2001