

Fragments in the Sample Database

As an example of how fragments may be defined, consider the fragments in the [PeerDirect sample database](#) tables.

Region Table

Fragment	Fields
F1	NameStr

Since there is only one (non-primary key) field in the region table, only one fragment is needed.

Employee Table

Fragment	Fields
F1	FName Initial LName RegionID

The Employee table was grouped as one fragment for the entire record because:

1. The data would not change much.
2. Employees' last names could change, but this would not occur frequently.
3. Employees could change regions, but this would not occur frequently.

Even if situations 2 and 3 occurred, the database would replicate correctly by updating and transmitting the entire record. The name fields combine for 65 characters.

Customer Table

Fragment	Fields
F1	NameStr
F2	Street City State ZIP Phone
F3	CntEmail CntName
F4	Comments
F5	SlsRepID

In the Customer Table, fields have been divided into logical fragments. For example, Street, City, State, ZIP and Phone are included in a single fragment. SlsRepID is in its own fragment mainly because it was "left-over". The Comments field could change frequently and although SlsRepID is not a stand-alone fragment, a split was made so that the SlsRepID field would not be replicated because of a change in the Comments field.

Purchase Table

Fragment	Fields
F1	PurDate CustID EmpID
F2	DelInst

The Purchase Table was divided logically into two fragments. Because of the way the Tracker program is designed, none of the fields in the first fragment can be changed. In order to be changed, the purchase has to be deleted, and a new one added. Because DelInst (Delivery Instructions) can be changed, it was put into its own fragment.

PurchDet Table

Fragment	Fields
F1	ProdID PurchQty Cost

As in the Purchase table, fragment choices in the PurchDet table were limited by business rules and the design of the Tracker program. A Purchase Detail cannot be modified, so the only way to change it is to add and delete it. Remember Purchase Details are essentially the line items on a Purchase Order. Since no modifications can be made to this record, there is no reason to have more than one fragment.

Product Table

Fragment Fields	
F1	ProdName ProdDesc
F2	Price

According to the business rules, the two fields most likely to change in the Product table were the Description field (ProdDesc) and the Price field. For this reason, we separated them into different fragments. The ProdID field is the primary key, and it can not change. Name and Description fit together logically, so the table was fragmented as shown above.