

APPENDIX E. DATA DEFINITION LANGUAGE

```
CREATE DEFAULT DOE_ASSIGNED
```

```
    AS 'DOE Assigned Code Value'
```

```
go
```

```
CREATE TABLE Access_Control (
```

```
    LSN_Accession_Number varchar(10) NOT NULL,
```

```
    Access_Control_Sequence int NOT NULL,
```

```
    Control_Info          varchar(3) NULL
```

```
)
```

```
go
```

```
ALTER TABLE Access_Control
```

```
    ADD PRIMARY KEY (LSN_Accession_Number, Access_Control_Sequence)
```

```
go
```

```
CREATE TABLE Addressee (
```

```
    LSN_Accession_Number varchar(10) NOT NULL,
```

```
    Addressee_Sequence  int NOT NULL,
```

```
    Name                varchar(50) NULL,
```

```
    Organization        varchar(65) NULL
```

```
)
```

```
go
```

```
ALTER TABLE Addressee
```

```
    ADD PRIMARY KEY (LSN_Accession_Number, Addressee_Sequence)
```

```
go
```

```
CREATE TABLE Audit_Transaction (
```

```
    Transaction_ID      int IDENTITY,
```

```
    LSN_Accession_Number varchar(10) NOT NULL,
```

```
    Transaction_Date    datetime NOT NULL,
```

```
    Transaction_Type    char(1) NOT NULL,
```

```
    Item_Type      char(1) NOT NULL
)
go
```

```
ALTER TABLE Audit_Transaction
    ADD PRIMARY KEY (Transaction_ID)
go
```

```
CREATE TABLE Author (
    LSN_Accession_Number varchar(10) NOT NULL,
    Author_Sequence      int NOT NULL,
    Name                  varchar(50) NOT NULL,
    Organization          varchar(65) NULL
)
go
```

```
ALTER TABLE Author
    ADD PRIMARY KEY (LSN_Accession_Number, Author_Sequence)
go
```

```
CREATE TABLE Document_Numbers (
    LSN_Accession_Number varchar(10) NOT NULL,
    Document_Number_Sequence int NOT NULL,
    Document_Number      varchar(30) NULL
)
go
```

```
ALTER TABLE Document_Numbers
    ADD PRIMARY KEY (LSN_Accession_Number,
    Document_Number_Sequence)
go
```

```
CREATE TABLE Document_Type (  
    LSN_Accession_Number varchar(10) NOT NULL,  
    Type_Sequence      int NOT NULL,  
    Document_Type      varchar(40) NULL  
)  
go
```

```
ALTER TABLE Document_Type  
    ADD PRIMARY KEY (LSN_Accession_Number, Type_Sequence)  
go
```

```
CREATE TABLE Header (  
    LSN_Accession_Number varchar(10) NOT NULL,  
    Participant_Accession_Number varchar(25) NOT NULL,  
    Title                varchar(1000) NOT NULL,  
    Document_Date        datetime NULL,  
    Comments             varchar(1000) NULL,  
    Non_Digital_Media    char(1) NULL,  
    QA_Record            char(1) NULL,  
    Descriptors          varchar(5000) NULL,  
    Participant_Code     varchar(3) NULL,  
    Text_URL             varchar(255) NULL  
)  
go
```

```
ALTER TABLE Header  
    ADD PRIMARY KEY (LSN_Accession_Number)  
go
```

```
CREATE TABLE Packages (  
    LSN_Accession_Number varchar(10) NOT NULL,  
    Package_Sequence     varchar(14) NOT NULL,
```

```
Package_ID      varchar(50) NULL
)
go
```

```
ALTER TABLE Packages
ADD PRIMARY KEY (LSN_Accession_Number, Package_Sequence)
go
```

```
CREATE TABLE Participant (
  UID            int IDENTITY,
  First_Name     varchar(30) NULL,
  Participant_Organization_ID int NOT NULL,
  Middle_Initial char NOT NULL,
  Last_Name      varchar(30) NULL,
  Organization   varchar(100) NULL,
  Address_Line_1 varchar(40) NULL,
  Address_Line_2 varchar(40) NULL,
  City           varchar(40) NULL,
  State          varchar(2) NULL,
  Zip_Code       varchar(10) NULL,
  Phone_Number   varchar(20) NULL,
  FAX_Number     varchar(20) NULL,
  E-Mail_Address varchar(100) NULL,
  Encrypted_Password varchar(8) NULL,
  Participant_Type varchar(1) NULL,
  POC_Flag       varchar(1) NULL,
  Administrator_Flag varchar(1) NULL
)
go
```

```
ALTER TABLE Participant
ADD PRIMARY KEY (UID, Participant_Organization_ID)
```

go

```
CREATE TABLE Participant_Organization (  
    Participant_Organization_ID int IDENTITY,  
    Name          varchar(200) NOT NULL,  
    Address_Line_1  varchar(40) NOT NULL,  
    Address_Line_2  varchar(40) NULL,  
    City           varchar(40) NOT NULL,  
    State          varchar(2) NOT NULL,  
    Zip_Code       varchar(10) NOT NULL,  
    Participant_ID  int NOT NULL,  
    url            varchar(255) NOT NULL  
)
```

go

```
ALTER TABLE Participant_Organization  
    ADD PRIMARY KEY (Participant_Organization_ID)
```

go

```
CREATE TABLE Related_Records (  
    LSN_Accession_Number varchar(10) NOT NULL,  
    Number                varchar(25) NOT NULL,  
    Code                  varchar(7) NULL  
)
```

go

```
ALTER TABLE Related_Records  
    ADD PRIMARY KEY (LSN_Accession_Number, Number)
```

go

```
CREATE TABLE Traceability (  
    LSN_Accession_Number varchar(10) NOT NULL,
```

```
Traceability_Sequence int NOT NULL,  
Code_And_Number    varchar(50) NULL  
)  
go
```

```
ALTER TABLE Traceability  
ADD PRIMARY KEY (LSN_Accession_Number, Traceability_Sequence)  
go
```

```
exec sp_bindefault DOE_ASSIGNED, 'Traceability.Code_And_Number'  
go
```

```
CREATE TABLE Versions (  
LSN_Accession_Number varchar(10) NOT NULL,  
Version_Sequence    int NOT NULL,  
Version             varchar(50) NULL  
)  
go
```

```
ALTER TABLE Versions  
ADD PRIMARY KEY (LSN_Accession_Number, Version_Sequence)  
go
```

```
CREATE TABLE Web_Location (  
LSN_Accession_Number varchar(10) NOT NULL,  
Web_Loc_Sequence    int NOT NULL,  
Image_URL           varchar(255) NOT NULL  
)  
go
```

```
ALTER TABLE Web_Location  
ADD PRIMARY KEY (LSN_Accession_Number, Web_Loc_Sequence)
```

go

```
ALTER TABLE Access_Control
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
```

go

```
ALTER TABLE Addressee
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
```

go

```
ALTER TABLE Audit_Transaction
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
```

go

```
ALTER TABLE Author
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
```

go

```
ALTER TABLE Document_Numbers
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
```

go

```
ALTER TABLE Document_Type
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
```

go

```
ALTER TABLE Packages
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
go
```

```
ALTER TABLE Participant
    ADD FOREIGN KEY (Participant_Organization_ID)
        REFERENCES Participant_Organization
go
```

```
ALTER TABLE Related_Records
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
go
```

```
ALTER TABLE Traceability
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
go
```

```
ALTER TABLE Versions
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
go
```

```
ALTER TABLE Web_Location
    ADD FOREIGN KEY (LSN_Accession_Number)
        REFERENCES Header
go
```


create trigger tI_Access_Control on Access_Control for INSERT as

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
```

```
/* INSERT trigger on Access_Control */
```

```
begin
```

```
declare @numrows int,
```

```
        @nullcnt int,
```

```
        @validcnt int,
```

```
        @errno int,
```

```
        @errmsg varchar(255)
```

```
select @numrows = @@rowcount
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
```

```
/* Header R/20 Access_Control ON CHILD INSERT RESTRICT */
```

```
if
```

```
    /* %ChildFK(" or",update) */
```

```
    update(LSN_Accession_Number)
```

```
begin
```

```
select @nullcnt = 0
```

```
select @validcnt = count(*)
```

```
from inserted,Header
```

```
where
```

```
    /* %JoinFKPK(inserted,Header) */
```

```
    inserted.LSN_Accession_Number = Header.LSN_Accession_Number
```

```
/* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */
```

```
if @validcnt + @nullcnt != @numrows
```

```
begin
```

```
select @errno = 30002,
```

```
        @errmsg = 'Cannot INSERT Access_Control because Header does not exist.'
```

```
goto error
```

```
end
```

```
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
    raiserror @errno @errmsg
    rollback transaction
end
go

create trigger tU_Access_Control on Access_Control for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Access_Control */
begin
    declare @numrows int,
            @nullcnt int,
            @validcnt int,
            @insLSN_Accession_Number varchar(10),
            @insAccess_Control_Sequence int,
            @errno int,
            @errmsg varchar(255)

    select @numrows = @@rowcount
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/20 Access_Control ON CHILD UPDATE RESTRICT */
if
    /* %ChildFK(" or",update) */
    update(LSN_Accession_Number)
begin
    select @nullcnt = 0
    select @validcnt = count(*)
        from inserted,Header
        where
```

```
/* %JoinFKPK(inserted,Header) */
inserted.LSN_Accession_Number = Header.LSN_Accession_Number
/* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows
begin
select @errno = 30007,
       @errmsg = 'Cannot UPDATE Access_Control because Header does not exist.'
goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
raiserror @errno @errmsg
rollback transaction
end
go

create trigger tI_Addressee on Addressee for INSERT as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* INSERT trigger on Addressee */
begin
declare @numrows int,
        @nullcnt int,
        @validcnt int,
        @errno int,
        @errmsg varchar(255)

select @numrows = @@rowcount
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
```

```
/* Header R/14 Addressee ON CHILD INSERT RESTRICT */
if
  /* %ChildFK(" or",update) */
  update(LSN_Accession_Number)
begin
  select @nullcnt = 0
  select @validcnt = count(*)
  from inserted,Header
  where
    /* %JoinFKPK(inserted,Header) */
    inserted.LSN_Accession_Number = Header.LSN_Accession_Number
  /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

  if @validcnt + @nullcnt != @numrows
  begin
    select @errno = 30002,
           @errmsg = 'Cannot INSERT Addressee because Header does not exist.'
    goto error
  end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
  raiserror @errno @errmsg
  rollback transaction
end
go

create trigger tU_Addressee on Addressee for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Addressee */
```

```
begin
  declare @numrows int,
          @nullcnt int,
          @validcnt int,
          @insLSN_Accession_Number varchar(10),
          @insAddressee_Sequence int,
          @errno int,
          @errmsg varchar(255)

  select @numrows = @@rowcount
  /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
  /* Header R/14 Addressee ON CHILD UPDATE RESTRICT */
  if
    /* %ChildFK(" or",update) */
    update(LSN_Accession_Number)
  begin
    select @nullcnt = 0
    select @validcnt = count(*)
    from inserted,Header
    where
      /* %JoinFKPK(inserted,Header) */
      inserted.LSN_Accession_Number = Header.LSN_Accession_Number
    /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

    if @validcnt + @nullcnt != @numrows
    begin
      select @errno = 30007,
             @errmsg = 'Cannot UPDATE Addressee because Header does not exist.'
      goto error
    end
  end
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
    raiserror @errno @errmsg
    rollback transaction
end
go

create trigger tI_Audit_Transaction on Audit_Transaction for INSERT as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* INSERT trigger on Audit_Transaction */
begin
    declare @numrows int,
            @nullcnt int,
            @validcnt int,
            @errno int,
            @errmsg varchar(255)

    select @numrows = @@rowcount
    /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
    /* Header R/19 Audit_Transaction ON CHILD INSERT SET NULL */
    if
        /* %ChildFK(" or",update) */
        update(LSN_Accession_Number)
    begin
        update Audit_Transaction
        set
            /* %SetFK(Audit_Transaction,NULL) */
            Audit_Transaction.LSN_Accession_Number = NULL
        from Audit_Transaction,inserted
        where
            /* %JoinPKPK(Audit_Transaction,inserted," = "," and") */
```

```
Audit_Transaction.Transaction_ID = inserted.Transaction_ID and
not exists (
  select * from Header
  where
    /* %JoinFKPK(inserted,Header," = "," and") */
    inserted.LSN_Accession_Number = Header.LSN_Accession_Number
)
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
  raiserror @errno @errmsg
  rollback transaction
end
go

create trigger tU_Audit_Transaction on Audit_Transaction for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Audit_Transaction */
begin
  declare @numrows int,
          @nullcnt int,
          @validcnt int,
          @insTransaction_ID int,
          @errno int,
          @errmsg varchar(255)

  select @numrows = @@rowcount
  /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
  /* Header R/19 Audit_Transaction ON CHILD UPDATE SET NULL */
  if
```

```
/* %ChildFK(" or",update) */
update(LSN_Accession_Number)
begin
update Audit_Transaction
set
/* %SetFK(Audit_Transaction,NULL) */
Audit_Transaction.LSN_Accession_Number = NULL
from Audit_Transaction,inserted
where
/* %JoinPKPK(Audit_Transaction,inserted," = "," and") */
Audit_Transaction.Transaction_ID = inserted.Transaction_ID and
not exists (
select * from Header
where
/* %JoinFKPK(inserted,Header," = "," and") */
inserted.LSN_Accession_Number = Header.LSN_Accession_Number
)
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
raiserror @errno @errmsg
rollback transaction
end
go

create trigger tL_Author on Author for INSERT as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* INSERT trigger on Author */
begin
declare @numrows int,
```



```
@nullcnt int,  
@validcnt int,  
@errno int,  
@errmsg varchar(255)
```

```
select @numrows = @@rowcount  
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */  
/* Header R/8 Author ON CHILD INSERT RESTRICT */  
if  
  /* %ChildFK(" or",update) */  
  update(LSN_Accession_Number)  
begin  
  select @nullcnt = 0  
  select @validcnt = count(*)  
  from inserted,Header  
  where  
    /* %JoinFKPK(inserted,Header) */  
    inserted.LSN_Accession_Number = Header.LSN_Accession_Number  
  /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */  
  
  if @validcnt + @nullcnt != @numrows  
  begin  
    select @errno = 30002,  
          @errmsg = 'Cannot INSERT Author because Header does not exist.'  
    goto error  
  end  
end  
  
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */  
return  
error:  
  raiserror @errno @errmsg
```

```
rollback transaction
end
go

create trigger tU_Author on Author for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Author */
begin
  declare @numrows int,
          @nullcnt int,
          @validcnt int,
          @insLSN_Accession_Number varchar(10),
          @insAuthor_Sequence int,
          @errno int,
          @errmsg varchar(255)

  select @numrows = @@rowcount
  /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
  /* Header R/8 Author ON CHILD UPDATE RESTRICT */
  if
    /* %ChildFK(" or",update) */
    update(LSN_Accession_Number)
  begin
    select @nullcnt = 0
    select @validcnt = count(*)
      from inserted,Header
      where
        /* %JoinFKPK(inserted,Header) */
        inserted.LSN_Accession_Number = Header.LSN_Accession_Number
    /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

    if @validcnt + @nullcnt != @numrows
```

```
begin
  select @errno = 30007,
         @errmsg = 'Cannot UPDATE Author because Header does not exist.'
  goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
  raiserror @errno @errmsg
  rollback transaction
end
go

create trigger tL_Document_Numbers on Document_Numbers for INSERT as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* INSERT trigger on Document_Numbers */
begin
  declare @numrows int,
          @nullcnt int,
          @validcnt int,
          @errno int,
          @errmsg varchar(255)

  select @numrows = @@rowcount
  /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
  /* Header R/21 Document_Numbers ON CHILD INSERT RESTRICT */
  if
    /* %ChildFK(" or",update) */
    update(LSN_Accession_Number)
  begin
```

```
select @nullcnt = 0
select @validcnt = count(*)
  from inserted,Header
  where
    /* %JoinFKPK(inserted,Header) */
    inserted.LSN_Accession_Number = Header.LSN_Accession_Number
/* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows
begin
  select @errno = 30002,
         @errmsg = 'Cannot INSERT Document_Numbers because Header does not exist.'
  goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
  raiserror @errno @errmsg
  rollback transaction
end
go

create trigger tU_Document_Numbers on Document_Numbers for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Document_Numbers */
begin
  declare @numrows int,
          @nullcnt int,
          @validcnt int,
          @insLSN_Accession_Number varchar(10),
```

```
        @insDocument_Number_Sequence int,
        @errno int,
        @errmsg varchar(255)

select @numrows = @@rowcount
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/21 Document_Numbers ON CHILD UPDATE RESTRICT */
if
    /* %ChildFK(" or",update) */
    update(LSN_Accession_Number)
begin
    select @nullcnt = 0
    select @validcnt = count(*)
        from inserted,Header
        where
            /* %JoinFKPK(inserted,Header) */
            inserted.LSN_Accession_Number = Header.LSN_Accession_Number
    /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows
begin
    select @errno = 30007,
        @errmsg = 'Cannot UPDATE Document_Numbers because Header does not exist.'
    goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
    raiserror @errno @errmsg
    rollback transaction
```

end

go

create trigger tL_Document_Type on Document_Type for INSERT as

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */

/* INSERT trigger on Document_Type */

begin

declare @numrows int,

 @nullcnt int,

 @validcnt int,

 @errno int,

 @errmsg varchar(255)

select @numrows = @@rowcount

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */

/* Header R/11 Document_Type ON CHILD INSERT RESTRICT */

if

 /* %ChildFK(" or",update) */

 update(LSN_Accession_Number)

begin

select @nullcnt = 0

select @validcnt = count(*)

from inserted,Header

where

 /* %JoinFKPK(inserted,Header) */

 inserted.LSN_Accession_Number = Header.LSN_Accession_Number

/* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows

begin

select @errno = 30002,

 @errmsg = 'Cannot INSERT Document_Type because Header does not exist.'

```
        goto error
    end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
    raiserror @errno @errmsg
    rollback transaction
end
go

create trigger tU_Document_Type on Document_Type for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Document_Type */
begin
    declare @numrows int,
            @nullcnt int,
            @validcnt int,
            @insLSN_Accession_Number varchar(10),
            @insType_Sequence int,
            @errno int,
            @errmsg varchar(255)

    select @numrows = @@rowcount
    /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
    /* Header R/11 Document_Type ON CHILD UPDATE RESTRICT */
    if
        /* %ChildFK(" or",update) */
        update(LSN_Accession_Number)
    begin
        select @nullcnt = 0
```

```
select @validcnt = count(*)
  from inserted,Header
  where
    /* %JoinFKPK(inserted,Header) */
    inserted.LSN_Accession_Number = Header.LSN_Accession_Number
/* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows
begin
  select @errno = 30007,
         @errmsg = 'Cannot UPDATE Document_Type because Header does not exist.'
  goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
  raiserror @errno @errmsg
  rollback transaction
end
go

create trigger tD_Header on Header for DELETE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* DELETE trigger on Header */
begin
  declare @errno int,
          @errmsg varchar(255)
  /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
  /* Header R/23 Packages ON PARENT DELETE RESTRICT */
  if exists (
```



```
select * from deleted,Packages
where
  /* %JoinFKPK(Packages,deleted," = "," and") */
  Packages.LSN_Accession_Number = deleted.LSN_Accession_Number
)
begin
  select @errno = 30001,
         @errmsg = 'Cannot DELETE Header because Packages exists.'
  goto error
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/22 Versions ON PARENT DELETE RESTRICT */
if exists (
  select * from deleted,Versions
  where
    /* %JoinFKPK(Versions,deleted," = "," and") */
    Versions.LSN_Accession_Number = deleted.LSN_Accession_Number
)
begin
  select @errno = 30001,
         @errmsg = 'Cannot DELETE Header because Versions exists.'
  goto error
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/21 Document_Numbers ON PARENT DELETE RESTRICT */
if exists (
  select * from deleted,Document_Numbers
  where
    /* %JoinFKPK(Document_Numbers,deleted," = "," and") */
    Document_Numbers.LSN_Accession_Number = deleted.LSN_Accession_Number
```

```
)  
begin  
  select @errno = 30001,  
         @errmsg = 'Cannot DELETE Header because Document_Numbers exists.'  
  goto error  
end  
  
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */  
/* Header R/20 Access_Control ON PARENT DELETE RESTRICT */  
if exists (  
  select * from deleted,Access_Control  
  where  
    /* %JoinFKPK(Access_Control,deleted," = "," and") */  
    Access_Control.LSN_Accession_Number = deleted.LSN_Accession_Number  
)  
begin  
  select @errno = 30001,  
         @errmsg = 'Cannot DELETE Header because Access_Control exists.'  
  goto error  
end  
  
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */  
/* Header R/19 Audit_Transaction ON PARENT DELETE SET NULL */  
update Audit_Transaction  
set  
  /* %SetFK(Audit_Transaction,NULL) */  
  Audit_Transaction.LSN_Accession_Number = NULL  
from Audit_Transaction,deleted  
where  
  /* %JoinFKPK(Audit_Transaction,deleted," = "," and") */  
  Audit_Transaction.LSN_Accession_Number = deleted.LSN_Accession_Number
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/16 Web_Location ON PARENT DELETE RESTRICT */
if exists (
  select * from deleted,Web_Location
  where
    /* %JoinFKPK(Web_Location,deleted," = "," and") */
    Web_Location.LSN_Accession_Number = deleted.LSN_Accession_Number
)
begin
  select @errno = 30001,
         @errmsg = 'Cannot DELETE Header because Web_Location exists.'
  goto error
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/14 Addressee ON PARENT DELETE RESTRICT */
if exists (
  select * from deleted,Addressee
  where
    /* %JoinFKPK(Addressee,deleted," = "," and") */
    Addressee.LSN_Accession_Number = deleted.LSN_Accession_Number
)
begin
  select @errno = 30001,
         @errmsg = 'Cannot DELETE Header because Addressee exists.'
  goto error
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/13 Traceability ON PARENT DELETE RESTRICT */
if exists (
  select * from deleted,Traceability
```

```
where
  /* %JoinFKPK(Traceability,deleted," = "," and") */
  Traceability.LSN_Accession_Number = deleted.LSN_Accession_Number
)
begin
  select @errno = 30001,
         @errmsg = 'Cannot DELETE Header because Traceability exists.'
  goto error
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/11 Document_Type ON PARENT DELETE RESTRICT */
if exists (
  select * from deleted,Document_Type
  where
    /* %JoinFKPK(Document_Type,deleted," = "," and") */
    Document_Type.LSN_Accession_Number = deleted.LSN_Accession_Number
)
begin
  select @errno = 30001,
         @errmsg = 'Cannot DELETE Header because Document_Type exists.'
  goto error
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/10 Related_Records ON PARENT DELETE RESTRICT */
if exists (
  select * from deleted,Related_Records
  where
    /* %JoinFKPK(Related_Records,deleted," = "," and") */
    Related_Records.LSN_Accession_Number = deleted.LSN_Accession_Number
)
```

```
begin
  select @errno = 30001,
         @errmsg = 'Cannot DELETE Header because Related_Records exists.'
  goto error
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/8 Author ON PARENT DELETE RESTRICT */
if exists (
  select * from deleted,Author
  where
    /* %JoinFKPK(Author,deleted," = "," and") */
    Author.LSN_Accession_Number = deleted.LSN_Accession_Number
)
begin
  select @errno = 30001,
         @errmsg = 'Cannot DELETE Header because Author exists.'
  goto error
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
  raiserror @errno @errmsg
  rollback transaction
end
go

create trigger tU_Header on Header for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Header */
begin
```

```
declare @numrows int,
        @nullcnt int,
        @validcnt int,
        @insLSN_Accession_Number varchar(10),
        @errno int,
        @errmsg varchar(255)

select @numrows = @@rowcount
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/23 Packages ON PARENT UPDATE RESTRICT */
if
    /* %ParentPK(" or",update) */
    update(LSN_Accession_Number)
begin
    if exists (
        select * from deleted,Packages
        where
            /* %JoinFKPK(Packages,deleted," = "," and") */
            Packages.LSN_Accession_Number = deleted.LSN_Accession_Number
        )
    begin
        select @errno = 30005,
               @errmsg = 'Cannot UPDATE Header because Packages exists.'
        goto error
    end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/22 Versions ON PARENT UPDATE RESTRICT */
if
    /* %ParentPK(" or",update) */
    update(LSN_Accession_Number)
```

```
begin
  if exists (
    select * from deleted, Versions
    where
      /* %JoinFKPK(Versions,deleted," = "," and") */
      Versions.LSN_Accession_Number = deleted.LSN_Accession_Number
  )
  begin
    select @errno = 30005,
           @errmsg = 'Cannot UPDATE Header because Versions exists.'
    goto error
  end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/21 Document_Numbers ON PARENT UPDATE RESTRICT */
if
  /* %ParentPK(" or",update) */
  update(LSN_Accession_Number)
begin
  if exists (
    select * from deleted, Document_Numbers
    where
      /* %JoinFKPK(Document_Numbers,deleted," = "," and") */
      Document_Numbers.LSN_Accession_Number = deleted.LSN_Accession_Number
  )
  begin
    select @errno = 30005,
           @errmsg = 'Cannot UPDATE Header because Document_Numbers exists.'
    goto error
  end
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/20 Access_Control ON PARENT UPDATE RESTRICT */
if
  /* %ParentPK(" or",update) */
  update(LSN_Accession_Number)
begin
  if exists (
    select * from deleted,Access_Control
    where
      /* %JoinFKPK(Access_Control,deleted," = "," and") */
      Access_Control.LSN_Accession_Number = deleted.LSN_Accession_Number
  )
  begin
    select @errno = 30005,
           @errmsg = 'Cannot UPDATE Header because Access_Control exists.'
    goto error
  end
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/19 Audit_Transaction ON PARENT UPDATE SET NULL */
if
  /* %ParentPK(" or",update) */
  update(LSN_Accession_Number)
begin
  update Audit_Transaction
  set
    /* %SetFK(Audit_Transaction,NULL) */
    Audit_Transaction.LSN_Accession_Number = NULL
  from Audit_Transaction,deleted
  where
    /* %JoinFKPK(Audit_Transaction,deleted," = "," and") */
```



```
Audit_Transaction.LSN_Accession_Number = deleted.LSN_Accession_Number  
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */  
/* Header R/16 Web_Location ON PARENT UPDATE RESTRICT */  
if  
  /* %ParentPK(" or",update) */  
  update(LSN_Accession_Number)  
begin  
  if exists (  
    select * from deleted,Web_Location  
    where  
      /* %JoinFKPK(Web_Location,deleted," = "," and") */  
      Web_Location.LSN_Accession_Number = deleted.LSN_Accession_Number  
  )  
  begin  
    select @errno = 30005,  
           @errmsg = 'Cannot UPDATE Header because Web_Location exists.'  
    goto error  
  end  
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */  
/* Header R/14 Addressee ON PARENT UPDATE RESTRICT */  
if  
  /* %ParentPK(" or",update) */  
  update(LSN_Accession_Number)  
begin  
  if exists (  
    select * from deleted,Addressee  
    where  
      /* %JoinFKPK(Addressee,deleted," = "," and") */
```

```
        Addressee.LSN_Accession_Number = deleted.LSN_Accession_Number
    )
begin
    select @errno = 30005,
           @errmsg = 'Cannot UPDATE Header because Addressee exists.'
    goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/13 Traceability ON PARENT UPDATE RESTRICT */
if
    /* %ParentPK(" or",update) */
    update(LSN_Accession_Number)
begin
    if exists (
        select * from deleted,Traceability
        where
            /* %JoinFKPK(Traceability,deleted," = "," and") */
            Traceability.LSN_Accession_Number = deleted.LSN_Accession_Number
    )
    begin
        select @errno = 30005,
               @errmsg = 'Cannot UPDATE Header because Traceability exists.'
        goto error
    end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/11 Document_Type ON PARENT UPDATE RESTRICT */
if
    /* %ParentPK(" or",update) */
```

```
update(LSN_Accession_Number)
begin
  if exists (
    select * from deleted,Document_Type
    where
      /* %JoinFKPK(Document_Type,deleted," = "," and") */
      Document_Type.LSN_Accession_Number = deleted.LSN_Accession_Number
  )
  begin
    select @errno = 30005,
           @errmsg = 'Cannot UPDATE Header because Document_Type exists.'
    goto error
  end
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/10 Related_Records ON PARENT UPDATE RESTRICT */
if
  /* %ParentPK(" or",update) */
  update(LSN_Accession_Number)
begin
  if exists (
    select * from deleted,Related_Records
    where
      /* %JoinFKPK(Related_Records,deleted," = "," and") */
      Related_Records.LSN_Accession_Number = deleted.LSN_Accession_Number
  )
  begin
    select @errno = 30005,
           @errmsg = 'Cannot UPDATE Header because Related_Records exists.'
    goto error
  end
end
```

end

/ ERwin Builtin Tue Mar 20 16:11:45 2001 */*

/ Header R/8 Author ON PARENT UPDATE RESTRICT */*

if

/ %ParentPK(" or",update) */*

update(LSN_Accession_Number)

begin

if exists (

select * from deleted,Author

where

/ %JoinFKPK(Author,deleted," = "," and") */*

Author.LSN_Accession_Number = deleted.LSN_Accession_Number

)

begin

select @errno = 30005,

@errmsg = 'Cannot UPDATE Header because Author exists.'

goto error

end

end

/ ERwin Builtin Tue Mar 20 16:11:45 2001 */*

return

error:

raiserror @errno @errmsg

rollback transaction

end

go

create trigger tL_Packages on Packages for INSERT as

/ ERwin Builtin Tue Mar 20 16:11:45 2001 */*

/ INSERT trigger on Packages */*

```
begin
  declare @numrows int,
          @nullcnt int,
          @validcnt int,
          @errno int,
          @errmsg varchar(255)

  select @numrows = @@rowcount
  /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
  /* Header R/23 Packages ON CHILD INSERT RESTRICT */
  if
    /* %ChildFK(" or",update) */
    update(LSN_Accession_Number)
  begin
    select @nullcnt = 0
    select @validcnt = count(*)
      from inserted,Header
      where
        /* %JoinFKPK(inserted,Header) */
        inserted.LSN_Accession_Number = Header.LSN_Accession_Number
    /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

    if @validcnt + @nullcnt != @numrows
    begin
      select @errno = 30002,
             @errmsg = 'Cannot INSERT Packages because Header does not exist.'
      goto error
    end
  end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
```

error:

 raiserror @errno @errmsg

 rollback transaction

end

go

create trigger tU_Packages on Packages for UPDATE as

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */

/* UPDATE trigger on Packages */

begin

 declare @numrows int,

 @nullcnt int,

 @validcnt int,

 @insLSN_Accession_Number varchar(10),

 @insPackage_Sequence varchar(14),

 @errno int,

 @errmsg varchar(255)

 select @numrows = @@rowcount

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */

/* Header R/23 Packages ON CHILD UPDATE RESTRICT */

if

 /* %ChildFK(" or",update) */

 update(LSN_Accession_Number)

begin

 select @nullcnt = 0

 select @validcnt = count(*)

 from inserted,Header

 where

 /* %JoinFKPK(inserted,Header) */

 inserted.LSN_Accession_Number = Header.LSN_Accession_Number

 /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

```
if @validcnt + @nullcnt != @numrows
begin
    select @errno = 30007,
           @errmsg = 'Cannot UPDATE Packages because Header does not exist.'
    goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
    raiserror @errno @errmsg
    rollback transaction
end
go

create trigger tI_Participant on Participant for INSERT as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* INSERT trigger on Participant */
begin
    declare @numrows int,
            @nullcnt int,
            @validcnt int,
            @errno int,
            @errmsg varchar(255)

    select @numrows = @@rowcount
    /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
    /* Participant_Organization R/17 Participant ON CHILD INSERT RESTRICT */
    if
        /* %ChildFK(" or",update) */
```

```
update(Participant_Organization_ID)
begin
select @nullcnt = 0
select @validcnt = count(*)
from inserted,Participant_Organization
where
/* %JoinFKPK(inserted,Participant_Organization) */
inserted.Participant_Organization_ID =
Participant_Organization.Participant_Organization_ID
/* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows
begin
select @errno = 30002,
@errmsg = 'Cannot INSERT Participant because Participant_Organization does not
exist.'
goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
raiserror @errno @errmsg
rollback transaction
end
go

create trigger tU_Participant on Participant for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Participant */
begin
```



```
declare @numrows int,
        @nullcnt int,
        @validcnt int,
        @insUID int,
        @insParticipant_Organization_ID int,
        @errno int,
        @errmsg varchar(255)

select @numrows = @@rowcount
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Participant_Organization R/17 Participant ON CHILD UPDATE RESTRICT */
if
/* %ChildFK(" or",update) */
update(Participant_Organization_ID)
begin
select @nullcnt = 0
select @validcnt = count(*)
from inserted,Participant_Organization
where
/* %JoinFKPK(inserted,Participant_Organization) */
inserted.Participant_Organization_ID =
Participant_Organization.Participant_Organization_ID
/* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows
begin
select @errno = 30007,
        @errmsg = 'Cannot UPDATE Participant because Participant_Organization does not
exist.'
goto error
end
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
    raiserror @errno @errmsg
    rollback transaction
end
go

create trigger tD_Participant_Organization on Participant_Organization for DELETE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* DELETE trigger on Participant_Organization */
begin
    declare @errno int,
            @errmsg varchar(255)
    /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
    /* Participant_Organization R/17 Participant ON PARENT DELETE RESTRICT */
    if exists (
        select * from deleted,Participant
        where
            /* %JoinFKPK(Participant,deleted," = "," and") */
            Participant.Participant_Organization_ID = deleted.Participant_Organization_ID
    )
    begin
        select @errno = 30001,
               @errmsg = 'Cannot DELETE Participant_Organization because Participant exists.'
        goto error
    end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
```

error:

 raiserror @errno @errmsg

 rollback transaction

end

go

create trigger tU_Participant_Organization on Participant_Organization for UPDATE as

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */

/* UPDATE trigger on Participant_Organization */

begin

 declare @numrows int,

 @nullcnt int,

 @validcnt int,

 @insParticipant_Organization_ID int,

 @errno int,

 @errmsg varchar(255)

 select @numrows = @@rowcount

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */

/* Participant_Organization R/17 Participant ON PARENT UPDATE RESTRICT */

if

 /* %ParentPK(" or",update) */

 update(Participant_Organization_ID)

begin

 if exists (

 select * from deleted,Participant

 where

 /* %JoinFKPK(Participant,deleted," = "," and") */

 Participant.Participant_Organization_ID = deleted.Participant_Organization_ID

)

begin

 select @errno = 30005,

```
        @errmsg = 'Cannot UPDATE Participant_Organization because Participant exists.'
    goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
    raiserror @errno @errmsg
    rollback transaction
end
go

create trigger tI_Related_Records on Related_Records for INSERT as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* INSERT trigger on Related_Records */
begin
    declare @numrows int,
            @nullcnt int,
            @validcnt int,
            @errno int,
            @errmsg varchar(255)

    select @numrows = @@rowcount
    /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
    /* Header R/10 Related_Records ON CHILD INSERT RESTRICT */
    if
        /* %ChildFK(" or",update) */
        update(LSN_Accession_Number)
    begin
        select @nullcnt = 0
        select @validcnt = count(*)
```

```
from inserted,Header
where
  /* %JoinFKPK(inserted,Header) */
  inserted.LSN_Accession_Number = Header.LSN_Accession_Number
/* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows
begin
  select @errno = 30002,
         @errmsg = 'Cannot INSERT Related_Records because Header does not exist.'
  goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
  raiserror @errno @errmsg
  rollback transaction
end
go

create trigger tU_Related_Records on Related_Records for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Related_Records */
begin
  declare @numrows int,
          @nullcnt int,
          @validcnt int,
          @insLSN_Accession_Number varchar(10),
          @insNumber varchar(25),
          @errno int,
```

```
@errmsg varchar(255)
```

```
select @numrows = @@rowcount
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
```

```
/* Header R/10 Related_Records ON CHILD UPDATE RESTRICT */
```

```
if
```

```
/* %ChildFK(" or",update) */
```

```
update(LSN_Accession_Number)
```

```
begin
```

```
select @nullcnt = 0
```

```
select @validcnt = count(*)
```

```
from inserted,Header
```

```
where
```

```
/* %JoinFKPK(inserted,Header) */
```

```
inserted.LSN_Accession_Number = Header.LSN_Accession_Number
```

```
/* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */
```

```
if @validcnt + @nullcnt != @numrows
```

```
begin
```

```
select @errno = 30007,
```

```
@errmsg = 'Cannot UPDATE Related_Records because Header does not exist.'
```

```
goto error
```

```
end
```

```
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
```

```
return
```

```
error:
```

```
raiserror @errno @errmsg
```

```
rollback transaction
```

```
end
```

```
go
```

create trigger tL_Traceability on Traceability for INSERT as

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */

/* INSERT trigger on Traceability */

begin

declare @numrows int,

 @nullcnt int,

 @validcnt int,

 @errno int,

 @errmsg varchar(255)

select @numrows = @@rowcount

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */

/* Header R/13 Traceability ON CHILD INSERT RESTRICT */

if

 /* %ChildFK(" or",update) */

 update(LSN_Accession_Number)

begin

 select @nullcnt = 0

 select @validcnt = count(*)

 from inserted,Header

 where

 /* %JoinFKPK(inserted,Header) */

 inserted.LSN_Accession_Number = Header.LSN_Accession_Number

 /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows

begin

 select @errno = 30002,

 @errmsg = 'Cannot INSERT Traceability because Header does not exist.'

 goto error

end

end

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
    raiserror @errno @errmsg
    rollback transaction
end
go

create trigger tU_Traceability on Traceability for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Traceability */
begin
    declare @numrows int,
            @nullcnt int,
            @validcnt int,
            @insLSN_Accession_Number varchar(10),
            @insTraceability_Sequence int,
            @errno int,
            @errmsg varchar(255)

    select @numrows = @@rowcount
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/13 Traceability ON CHILD UPDATE RESTRICT */
    if
        /* %ChildFK(" or",update) */
        update(LSN_Accession_Number)
    begin
        select @nullcnt = 0
        select @validcnt = count(*)
            from inserted,Header
            where
```



```
/* %JoinFKPK(inserted,Header) */
inserted.LSN_Accession_Number = Header.LSN_Accession_Number
/* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows
begin
select @errno = 30007,
       @errmsg = 'Cannot UPDATE Traceability because Header does not exist.'
goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
raiserror @errno @errmsg
rollback transaction
end
go

create trigger tL_Versions on Versions for INSERT as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* INSERT trigger on Versions */
begin
declare @numrows int,
        @nullcnt int,
        @validcnt int,
        @errno int,
        @errmsg varchar(255)

select @numrows = @@rowcount
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
```

```
/* Header R/22 Versions ON CHILD INSERT RESTRICT */
if
  /* %ChildFK(" or",update) */
  update(LSN_Accession_Number)
begin
  select @nullcnt = 0
  select @validcnt = count(*)
  from inserted,Header
  where
    /* %JoinFKPK(inserted,Header) */
    inserted.LSN_Accession_Number = Header.LSN_Accession_Number
  /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

  if @validcnt + @nullcnt != @numrows
  begin
    select @errno = 30002,
           @errmsg = 'Cannot INSERT Versions because Header does not exist.'
    goto error
  end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
  raiserror @errno @errmsg
  rollback transaction
end
go

create trigger tU_Versions on Versions for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Versions */
```

```
begin
  declare @numrows int,
          @nullcnt int,
          @validcnt int,
          @insLSN_Accession_Number varchar(10),
          @insVersion_Sequence int,
          @errno int,
          @errmsg varchar(255)

  select @numrows = @@rowcount
  /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
  /* Header R/22 Versions ON CHILD UPDATE RESTRICT */
  if
    /* %ChildFK(" or",update) */
    update(LSN_Accession_Number)
  begin
    select @nullcnt = 0
    select @validcnt = count(*)
    from inserted,Header
    where
      /* %JoinFKPK(inserted,Header) */
      inserted.LSN_Accession_Number = Header.LSN_Accession_Number
    /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

  if @validcnt + @nullcnt != @numrows
  begin
    select @errno = 30007,
           @errmsg = 'Cannot UPDATE Versions because Header does not exist.'
    goto error
  end
end
```

```
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
    raiserror @errno @errmsg
    rollback transaction
end
go

create trigger tI_Web_Location on Web_Location for INSERT as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* INSERT trigger on Web_Location */
begin
    declare @numrows int,
            @nullcnt int,
            @validcnt int,
            @errno int,
            @errmsg varchar(255)

    select @numrows = @@rowcount
    /* ERwin Builtin Tue Mar 20 16:11:45 2001 */
    /* Header R/16 Web_Location ON CHILD INSERT RESTRICT */
    if
        /* %ChildFK(" or",update) */
        update(LSN_Accession_Number)
    begin
        select @nullcnt = 0
        select @validcnt = count(*)
        from inserted,Header
        where
            /* %JoinFKPK(inserted,Header) */
            inserted.LSN_Accession_Number = Header.LSN_Accession_Number
        /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

```

```
if @validcnt + @nullcnt != @numrows
begin
    select @errno = 30002,
           @errmsg = 'Cannot INSERT Web_Location because Header does not exist.'
    goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
    raiserror @errno @errmsg
    rollback transaction
end
go

create trigger tU_Web_Location on Web_Location for UPDATE as
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* UPDATE trigger on Web_Location */
begin
    declare @numrows int,
            @nullcnt int,
            @validcnt int,
            @insLSN_Accession_Number varchar(10),
            @insWeb_Loc_Sequence int,
            @errno int,
            @errmsg varchar(255)

    select @numrows = @@rowcount
/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
/* Header R/16 Web_Location ON CHILD UPDATE RESTRICT */
```

```
if
  /* %ChildFK(" or",update) */
  update(LSN_Accession_Number)
begin
  select @nullcnt = 0
  select @validcnt = count(*)
  from inserted,Header
  where
    /* %JoinFKPK(inserted,Header) */
    inserted.LSN_Accession_Number = Header.LSN_Accession_Number
  /* %NotNullFK(inserted," is null","select @nullcnt = count(*) from inserted where"," and") */

if @validcnt + @nullcnt != @numrows
begin
  select @errno = 30007,
         @errmsg = 'Cannot UPDATE Web_Location because Header does not exist.'
  goto error
end
end

/* ERwin Builtin Tue Mar 20 16:11:45 2001 */
return
error:
  raiserror @errno @errmsg
  rollback transaction
end
go
```