Physical Data Model	
Model: LcLs_Elements_Woodley_Chgs	
Package:	
Diagram: LcLs_Elements_Woodley_Chgs	
Author: egrunhau	Date : 10/16/2008
Version :	

XML_DOCS

ID	NUMBER	<pk>	not null
CREATED_BY	VARCHAR2(30)		not null
DATE_CREATED	DATE		not null
UPDATED_BY	VARCHAR2(30)		null
DATE_UPDATED	DATE		null
ELEMENT_FILENAME	VARCHAR2(60)		null
ELEMENT_DATE	DATE		null
ELEMENT_XML	XMLTYPE(2000, -1)		null
DEVICE_FILENAME	VARCHAR2(60)		null
DEVICE_DATE	DATE		null
DEVICE_XML	XMLTYPE(2000, -1)		null
COMMENTS	VARCHAR2(200)		null
MIME_TYPE	VARCHAR2(100)		null

PK_XML_DOCS <pk>

HARDWARE_SETTINGS

ID	NUMBER	<pk>	not null
PV_LOG_FILENAME	VARCHAR2(60)	<ak>	not null
CREATED_BY	VARCHAR2(30)		not null
DATE_CREATED	DATE		not null
UPDATED_BY	VARCHAR2(30)		null
DATE_UPDATED	DATE		null

AK_UK_PV_LOG_FILENAME_HARDWARE <ak>
PK_HARDWARE_SETTINGS <pk>

INITIAL_CONDITIONS

ID	NUMBER	<pk>	not null
INIT_COND_FILENAME	VARCHAR2(60)	<ak>	not null
CREATED_BY	VARCHAR2(30)		not null
DATE_CREATED	DATE		not null
UPDATED_BY	VARCHAR2(30)		null
DATE_UPDATED	DATE		null

AK_UK_FILENAME_INITIAL_ <ak>
PK_INITIAL_CONDITIONS <pk>

SYMBOLS_UPLOAD_LOG

UPLOAD_ID	NUMBER(7)	<pk>	not null
DATE_UPLOADED	DATE		null
UPLOADED_BY	VARCHAR2(30)		null
COMMENTS	VARCHAR2(1000)		null
FILENAME	VARCHAR2(200)		null
VERSION_DATE	DATE		null
BEAMLINE	NUMBER(7)	<i>	null

SYMBOLS_UPLOAD_LOG_PK <pk>
SYM_UPLD_LOG_BEAMLINE_IDX <i>

SYMBOLS_UPLOAD

ID	NUMBER(7)	<pk>	not null
UPLOAD_ID	NUMBER(7)	<fk2> <i3>	null
SOLID_EDGE_ID	NUMBER(7)		null
AREA	VARCHAR2(6)		null
KEYWORD	VARCHAR2(4)		null
ELEMENT	VARCHAR2(16)	<i2>	null
ENGINEERING_NAME	VARCHAR2(16)		null
EFFECTIVE_LENGTH	NUMBER		null
APERTURE	NUMBER		null
ANGLE	NUMBER		null
K1	NUMBER		null
K2	NUMBER		null
TILT	NUMBER		null
E1	NUMBER		null
E2	NUMBER		null
H1	NUMBER		null
H2	NUMBER		null
ENERGY	NUMBER		null
SUML	NUMBER		null
SOLID_EDGE_X_COOR	NUMBER		null
SOLID_EDGE_Y_COOR	NUMBER		null
SOLID_EDGE_Z_COOR	NUMBER		null
SOLID_EDGE_X_ANGLE	NUMBER		null
SOLID_EDGE_Y_ANGLE	NUMBER		null
SOLID_EDGE_Z_ANGLE	NUMBER		null
REVISION	NUMBER(3)		null
REVISION_DATE	DATE		null
ELEMENT_ID	NUMBER(5)	<fk1> <i1>	null
RF_FREQUENCY	NUMBER		null
RF_AMPLITUDE	NUMBER		null
RF_PHASE	NUMBER		null
RF_GRADIENT	NUMBER		null
RF_POWER_FRACTION	NUMBER		null
Z_LENGTH	NUMBER		null
FRINGE_FIELD_INTEGRAL	NUMBER		null
INTEGRATED_FIELD_BL	NUMBER		null
FIELD_B	NUMBER		null
INTEGRATED_FIELD_GRAD_GL	NUMBER		null
FIELD_GRADIENT_G	NUMBER		null
XAL_SCALE_NAME	VARCHAR2(30)		null
XAL_SCALE_VALUE	NUMBER		null
XAL_POLARITY	NUMBER		null
MAGNET_X_COOR	NUMBER		null
MAGNET_Y_COOR	NUMBER		null
MAGNET_Z_COOR	NUMBER		null
MAGNET_X_ANGLE	NUMBER		null
MAGNET_Y_ANGLE	NUMBER		null
MAGNET_Z_ANGLE	NUMBER		null
SOLENOID_STRENGTH_KS	NUMBER		null
UNDULATOR_PERIOD_LENGTH	NUMBER		null
UNDULATOR_STRENGTH_K	NUMBER		null
X_SIZE	NUMBER		null
Y_SIZE	NUMBER		null
SECTION	VARCHAR2(60)		null
DIST_FROM_SECTION_START	NUMBER		null
XAL_KEYWORD	VARCHAR2(30)		null

SYMBOLS_UPLOAD_PK <pk>
LCLS_ELEMENTS_SYM_UPLOAD <i1>
SYMBOLS_ELEMENT <i2>
SYMBOLS_UPLOAD_ID <i3>

DEVICE_TYPES

ID	NUMBER	<pk>	not null
DEVICE_TYPE	VARCHAR2(4)	<ak>	not null
CREATED_BY	VARCHAR2(30)		not null
DATE_CREATED	DATE		not null
UPDATED_BY	VARCHAR2(30)		null
DATE_UPDATED	DATE		null
DEFAULT_SLICING_POS_CHK	NUMBER	<i>	null

AK_UK_DEVICE_TYPE_DEVICE_T <ak>
PK_DEVICE_TYPES <pk>
BMP_DEVICE_TYPES_SLICEPOS <i>

RUNS

ID	NUMBER	<pk>	not null
HARDWARE_SETTINGS_ID	NUMBER	<fk1> <i3>	null
XML_DOCS_ID	NUMBER	<fk3> <i2>	null
INITIAL_CONDITIONS_ID	NUMBER	<fk2> <i4>	null
CREATED_BY	VARCHAR2(30)		not null
DATE_CREATED	DATE		not null
UPDATED_BY	VARCHAR2(30)		null
DATE_UPDATED	DATE		null
RUN_SOURCE_CHK	VARCHAR2(60)	<i1>	null
RUN_ELEMENT_FILENAME	VARCHAR2(60)		null
RUN_ELEMENT_DATE	DATE		not null
RUN_DEVICE_FILENAME	VARCHAR2(60)		null
RUN_DEVICE_DATE	DATE		not null
COMMENTS	VARCHAR2(200)		null

PK_RUNS <pk>
BMP_RUNS_RUN_SOURCE_CHK <i1>
FK_DOC_RUN <i2>
FK_HW_RUNS <i3>
FK_IC_RUNS <i4>

V_LCLS_ELEMENTS_REPORT

ELEMENT_ID	NUMBER(5)	not null
ELEMENT	VARCHAR2(16)	not null
FIRST_SOURCED_FROM	VARCHAR2(30)	not null
ELEMENT_TYPE	VARCHAR2(6)	null
ACTIVE_FLAG	VARCHAR2(1)	null
ELEMENT_COMMENT	VARCHAR2(200)	null
AREA	VARCHAR2(11)	null
KEYWORD	VARCHAR2(4)	null
ENGINEERING_NAME	VARCHAR2(16)	null
SUML_M	NUMBER	null
SUML_FT	NUMBER	null
LINACZ_M	NUMBER	null
LINACZ_FT	NUMBER	null
LTU_SUML_M	NUMBER	null
LTU_SUML_FT	NUMBER	null
LTU_LINACZ_M	NUMBER	null
LTU_LINACZ_FT	NUMBER	null
MAD_SUML_M	NUMBER	null
MAD_SOLID_EDGE_XCOOR_M	NUMBER	null
MAD_SUML_FT	NUMBER	null
MAD_SOLID_EDGE_XCOOR_FT	NUMBER	null
NONMAD_SUML_M	NUMBER	null
NONMAD_SOLID_EDGE_XCOOR_M	NUMBER	null
NONMAD_SUML_FT	NUMBER	null
NONMAD_SOLID_EDGE_XCOOR_FT	NUMBER	null
PRIMARY	VARCHAR2(200)	null
SLC_MICRO_NAME	VARCHAR2(200)	null
IOC_LOC	VARCHAR2(200)	null
UNIT	VARCHAR2(200)	null
EPICS_DEVICE_NAME	VARCHAR2(602)	null
SLC_NAME	VARCHAR2(602)	null
EPICS_CHANNEL_ACCESS_NAME	VARCHAR2(602)	null
IOC_CAPTAR_SEARCH	VARCHAR2(404)	null
SLC_CAPTAR_SEARCH	VARCHAR2(404)	null
BEAMLINE_ID	NUMBER(7)	null
BEAMLINE	VARCHAR2(100)	null
SECTION_ID	NUMBER(10)	null
SECTIONS	VARCHAR2(60)	null
SECTION_UPLOAD_ID	NUMBER(7)	null
BEGIN_DBMARK	VARCHAR2(16)	null
BEGIN_SUML	NUMBER	null
END_DBMARK	VARCHAR2(16)	null
END_SUML	NUMBER	null
DISTANCE_FROM_START	NUMBER	null
DRAW_ID	NUMBER	null
DRAWING_NO	VARCHAR2(494)	null
INSTALLED_FLAG	VARCHAR2(1)	null
BSA_FLAG	CHAR	null
BSA_FLAG_EPICS	CHAR	null
BSA_FLAG_SLC	CHAR	null
OBSTRUCTION	VARCHAR2(1)	null
SECTOR	VARCHAR2(20)	null
SECTOR_LOCATION	VARCHAR2(20)	null
IRMIS_IOC_NAMES	VARCHAR2(4000)	null
RF_FREQUENCY	NUMBER	null
RF_AMPLITUDE	NUMBER	null
RF_PHASE	NUMBER	null
RF_GRADIENT	NUMBER	null
RF_POWER_FRACTION	NUMBER	null
Z_LENGTH	NUMBER	null
FRINGE_FIELD_INTEGRAL	NUMBER	null
INTEGRATED_FIELD_BL	NUMBER	null
FIELD_B	NUMBER	null
INTEGRATED_FIELD_GRAD_GL	NUMBER	null
FIELD_GRADIENT_G	NUMBER	null
XAL_SCALE_NAME	VARCHAR2(30)	null
XAL_SCALE_VALUE	NUMBER	null
XAL_POLARITY	NUMBER	null
MAGNET_X_COOR	NUMBER	null
MAGNET_Y_COOR	NUMBER	null
MAGNET_Z_COOR	NUMBER	null
MAGNET_X_ANGLE	NUMBER	null
MAGNET_Y_ANGLE	NUMBER	null
MAGNET_Z_ANGLE	NUMBER	null
SOLENOID_STRENGTH_KS	NUMBER	null
UNDULATOR_PERIOD_LENGTH	NUMBER	null
UNDULATOR_STRENGTH_K	NUMBER	null
X_SIZE	NUMBER	null
Y_SIZE	NUMBER	null
SECTION	VARCHAR2(60)	null
DIST_FROM_SECTION_START	NUMBER	null
XAL_KEYWORD	VARCHAR2(30)	null

LCLS_ELEMENTS

ELEMENT_ID	NUMBER(5)	<pk>	not null
ELEMENT	VARCHAR2(16)	<ak>	not null
FIRST_SOURCED_FROM	VARCHAR2(30)		not null
ELEMENT_TYPE	VARCHAR2(6)		null
ACTIVE_FLAG	VARCHAR2(1)	<i3>	null
ELEMENT_COMMENT	VARCHAR2(200)		null
IS_BEAMLINE_ELEMENT_FLAG	VARCHAR2(1)	<i8>	null
AREA	VARCHAR2(6)		null
KEYWORD	VARCHAR2(4)		null
ENGINEERING_NAME	VARCHAR2(16)		null
NONMAD_SUML_M	NUMBER		null
NONMAD_SOLID_EDGE_XCOOR_M	NUMBER		null
PRIMARY	VARCHAR2(200)	<i9>	null
SLC_MICRO_NAME	VARCHAR2(200)	<i10>	null
IOC_LOC	VARCHAR2(200)	<i7>	null
UNIT	VARCHAR2(200)	<i11>	null
CREATED_BY	VARCHAR2(90)		null
DATE_CREATED	DATE		null
UPDATED_BY	VARCHAR2(90)		null
DATE_UPDATED	DATE		null
BEAMLINE_ID	NUMBER(7)	<i4>	null
DRAW_ID	NUMBER	<i5>	null
INSTALLED_FLAG	VARCHAR2(1)	<i6>	null
NONMAD_LTU_SUML_M	NUMBER		null
NONMAD_LTU_SOLID_EDGE_XCOOR_M	NUMBER		null
SECTION_ID	NUMBER(10)		null
OBSTRUCTION_CHK	VARCHAR2(1)	<i12>	null
SECTOR	VARCHAR2(20)	<i13>	null
SECTOR_LOCATION	VARCHAR2(20)	<i14>	null

AK_ELEMENT_UK_LCLS_ELE <ak>
PK_LCLS_ELEMENTS <pk>
FN_LCLS_ELEMENTS_EPICS_NAME <i1>
FN_LCLS_ELEMENTS_SLC_NAME <i2>
IDX_LCLS_ELEMENTS_ACTIVE_FLAG <i3>
IDX_LCLS_ELEMENTS_BEAMLINE_ID <i4>
IDX_LCLS_ELEMENTS_DRAW_ID <i5>
IDX_LCLS_ELEMENTS_INSTALL_FLAG <i6>
IDX_LCLS_ELEMENTS_IOC_LOC <i7>
IDX_LCLS_ELEMENTS_IS_BEAM_FLAG <i8>
IDX_LCLS_ELEMENTS_PRIMARY <i9>
IDX_LCLS_ELEMENTS_SLC_MICRO <i10>
IDX_LCLS_ELEMENTS_UNIT <i11>
IDX_LCLS_ELE_OBSTRUCTION_CHK <i12>
IDX_LCLS_ELE_SECTOR <i13>
IDX_LCLS_ELE_SECTOR_LOC <i14>
LCLS_ELEMENTS_ELEMENT_FNC <i15>

MODEL_DEVICES

ID	NUMBER	<pk>	not null
RUNS_ID	NUMBER	<fk2> <i2>	null
LCLS_ELEMENTS_ELEMENT_ID	NUMBER(5)	<fk3>	null
DEVICE_TYPES_ID	NUMBER	<fk1> <i3>	null
CREATED_BY	VARCHAR2(30)		not null
DATE_CREATED	DATE		not null
UPDATED_BY	VARCHAR2(30)		null
DATE_UPDATED	DATE		null
DEVICE_PROPERTY	VARCHAR2(30)		null
DEVICE_VALUE	NUMBER		null

PK_MODEL_DEVICES <pk>
FK_ELEM_DEVICE <i1>
FK_RUN_DEVICE <i2>
FK_TYPE_DEVICE <i3>

ELEMENT_MODELS

ID	NUMBER	<pk>	not null
RUNS_ID	NUMBER	<fk1> <i2>	null
LCLS_ELEMENTS_ELEMENT_ID	NUMBER(5)	<fk2>	null
CREATED_BY	VARCHAR2(30)		not null
DATE_CREATED	DATE		not null
UPDATED_BY	VARCHAR2(30)		null
DATE_UPDATED	DATE		null
ELEMENT_NAME	VARCHAR2(60)		null
INDEX_SLICE_CHK	NUMBER		null
ZPOS	NUMBER		null
EK	NUMBER		null
ALPHA_X	NUMBER		null
ALPHA_Y	NUMBER		null
BETA_X	NUMBER		null
BETA_Y	NUMBER		null
PSI_X	NUMBER		null
PSI_Y	NUMBER		null
ETA_X	NUMBER		null
ETA_Y	NUMBER		null
ETAP_X	NUMBER		null
ETAP_Y	NUMBER		null
R11	NUMBER		null
R12	NUMBER		null
R13	NUMBER		null
R14	NUMBER		null
R15	NUMBER		null
R16	NUMBER		null
R21	NUMBER		null
R22	NUMBER		null
R23	NUMBER		null
R24	NUMBER		null
R25	NUMBER		null
R26	NUMBER		null
R31	NUMBER		null
R32	NUMBER		null
R33	NUMBER		null
R34	NUMBER		null
R35	NUMBER		null
R36	NUMBER		null
R41	NUMBER		null
R42	NUMBER		null
R43	NUMBER		null
R44	NUMBER		null
R45	NUMBER		null
R46	NUMBER		null
R51	NUMBER		null
R52	NUMBER		null
R53	NUMBER		null
R54	NUMBER		null
R55	NUMBER		null
R56	NUMBER		null
R61	NUMBER		null
R62	NUMBER		null
R63	NUMBER		null
R64	NUMBER		null
R65	NUMBER		null
R66	NUMBER		null

PK_ELEMENT_MODELS <pk>
FK_ELEM_MODEL <i1>
FK_RUN_ELEM_MODELS <i2>

LTU_UPLOAD

ID	NUMBER(7)	<pk>	not null
UPLOAD_ID	NUMBER(7)	<fk2> <i3>	null
SOLID_EDGE_ID	NUMBER(7)		null
AREA	VARCHAR2(6)		null
KEYWORD	VARCHAR2(4)		null
ELEMENT	VARCHAR2(16)	<i2>	null
ENGINEERING_NAME	VARCHAR2(16)		null
EFFECTIVE_LENGTH	NUMBER		null
APERTURE	NUMBER		null
ANGLE	NUMBER		null
K1	NUMBER		null
K2	NUMBER		null
TILT	NUMBER		null
E1	NUMBER		null
E2	NUMBER		null
H1	NUMBER		null
H2	NUMBER		null
ENERGY	NUMBER		null
SUML	NUMBER		null
SOLID_EDGE_X_COOR	NUMBER		null
SOLID_EDGE_Y_COOR	NUMBER		null
SOLID_EDGE_Z_COOR	NUMBER		null
SOLID_EDGE_X_ANGLE	NUMBER		null
SOLID_EDGE_Y_ANGLE	NUMBER		null
SOLID_EDGE_Z_ANGLE	NUMBER		null
REVISION	NUMBER(3)		null
REVISION_DATE	DATE		null
ELEMENT_ID	NUMBER(5)	<fk1> <i1>	null
RF_FREQUENCY	NUMBER		null
RF_AMPLITUDE	NUMBER		null
RF_PHASE	NUMBER		null
RF_GRADIENT	NUMBER		null
RF_POWER_FRACTION	NUMBER		null
Z_LENGTH	NUMBER		null
FRINGE_FIELD_INTEGRAL	NUMBER		null
INTEGRATED_FIELD_BL	NUMBER		null
FIELD_B	NUMBER		null
INTEGRATED_FIELD_GRAD_GL	NUMBER		null
FIELD_GRADIENT_G	NUMBER		null
XAL_SCALE_NAME	VARCHAR2(30)		null
XAL_SCALE_VALUE	NUMBER		null
XAL_POLARITY	NUMBER		null
MAGNET_X_COOR	NUMBER		null
MAGNET_Y_COOR	NUMBER		null
MAGNET_Z_COOR	NUMBER		null
MAGNET_X_ANGLE	NUMBER		null
MAGNET_Y_ANGLE	NUMBER		null
MAGNET_Z_ANGLE	NUMBER		null
SOLENOID_STRENGTH_KS	NUMBER		null
UNDULATOR_PERIOD_LENGTH	NUMBER		null
UNDULATOR_STRENGTH_K	NUMBER		null
X_SIZE	NUMBER		null
Y_SIZE	NUMBER		null
SECTION	VARCHAR2(60)		null
DIST_FROM_SECTION_START	NUMBER		null
XAL_KEYWORD	VARCHAR2(30)		null

LTU_UPLOAD_PK <pk>
LCLS_ELEMENTS_LTU_UPLOAD <i1>
LTU_ELEMENT <i2>
LTU_UPLOAD_ID <i3>

LTU_UPLOAD_LOG

UPLOAD_ID	NUMBER(7)	<pk>	not null
DATE_UPLOADED	DATE		null
UPLOADED_BY	VARCHAR2(30)		null
COMMENTS	VARCHAR2(1000)		null
FILENAME	VARCHAR2(200)		null
VERSION_DATE	DATE		null
BEAMLINE	NUMBER(7)	<i>	null

LTU_UPLOAD_LOG_PK <pk>
LTU_UPLD_LOG_BEAMLINE_IDX <i>

FK_RUNS_FK_HW_RUN_HARDWARE
FK_RUNS_FK_IC_RUN_INITIAL
FK_RUNS_FK_DOC_RU_XML_DOCS
FK_MODEL_DE_FK_TYPE_D_DEVICE_T
FK_MODEL_DE_FK_RUN_DE_RUNS
FK_ELEMENT__FK_RUN_EL_RUNS
FK_ELEMENT__REFERENCE_LCLS_ELE
FK_MODEL_DE_REFERENCE_LCLS_ELE
SYMBOLS_UPLOAD_SYMBOLS_UP_FK1
FK_SYMBOLS__LCLS_ELEM_LCLS_ELE
FK_LTU__LCLS_ELEM_LCLS_ELE
LTU_UPLOAD_LTU_UP_FK1