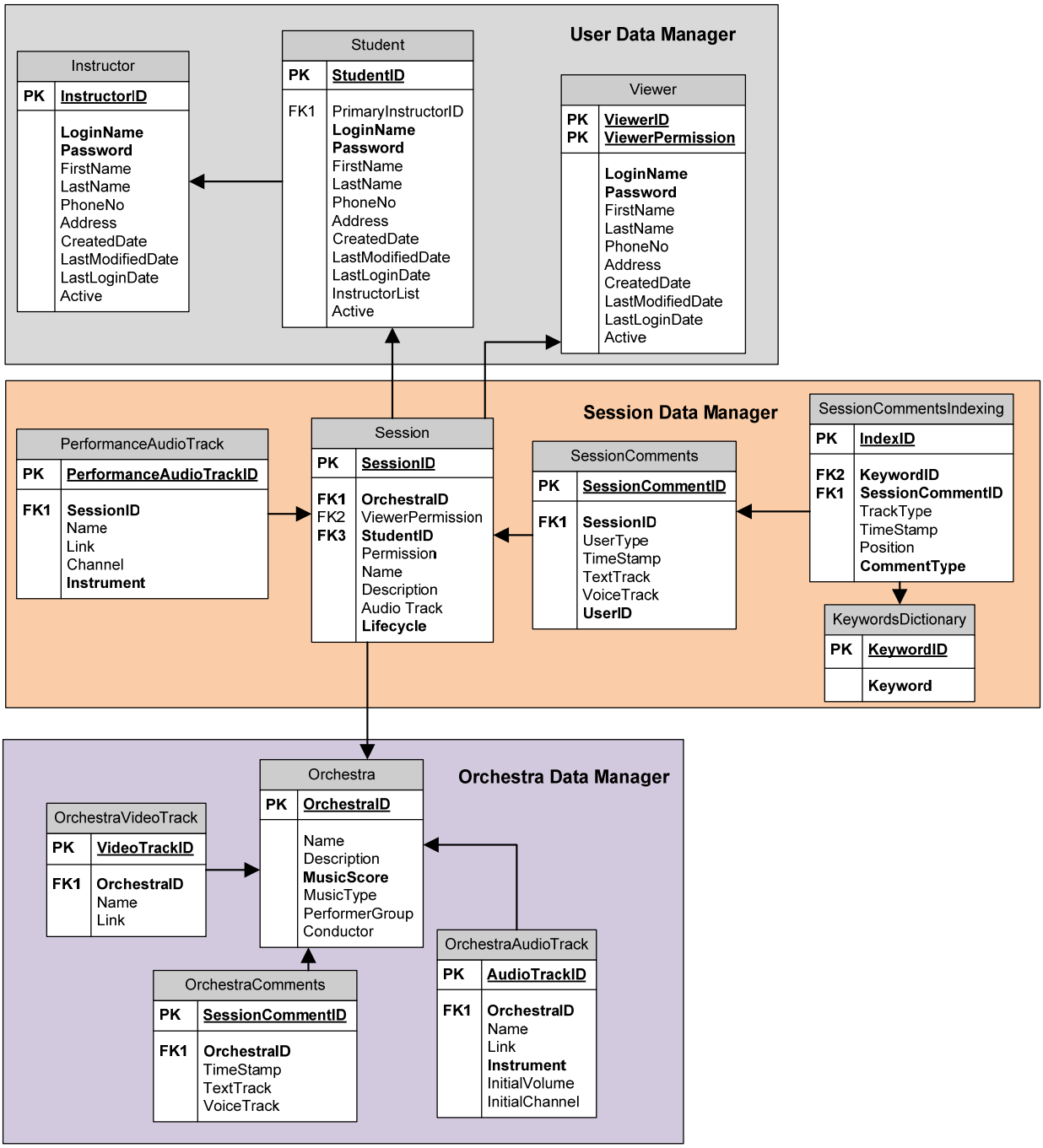
Network-Enabled Platforms (NEP-2) Program
Progress Report – Feb 28, 2010.

Project NEP54: Open Orchestra
Appendix 4: Database Specifications

The database structure remains as originally proposed in the SOW.

Open Orchestra Table Structures



Here database tables are divided into three categories :

1. User data specific tables for user account, which includes student, instructor and viewer accounts. Student table associates with Instructor table based on its foreign key « PrimaryInstructorID » so that instructor can easily query student whomever sets it as the primary instructor.
2. Session data specific tables for session data, which includes Session, PerformanceAudioTrack, SessionComments, and SessionCommentIndexing and KeywordsDictionary both used for indexing purpose. The Session table associates with Student table based on its foreign key as « StudentID», with Orchestra table based on its foreign key OrchestraID and with Viewer table based on its foreign key ViewerPermission. Both PerformanceAudioTrack and SessionComments associate with Session table based on foreign key « SessionID ».
3. Orchestra data defines tables to store recorded video and audio tracks of orchestral and small ensemble musical works in database. Here each Orchestra table is being associated with OrchestraVideoTrack and OrchestraAudioTrack. A OrchestraComments table is reserved so that instructor or student can also leave comments on professional's performance.

Description of Each Table

Following is designed data structure of all above tables:

Student

Physical Name	Data Type	Req'd	PK	Notes
StudentID	INTEGER	☑	☑	StudentID identifies student
PrimaryInstructorID	INTEGER	☐	☐	Primary InstructorID of student
LoginName	VARCHAR(32)	☑	☐	Login Name of student
Password	CHAR(32)	☑	☐	Password of student
FirstName	VARCHAR(32)	☐	☐	First Name of student
LastName	VARCHAR(32)	☐	☐	Last Name of student
PhoneNo	CHAR(10)	☐	☐	Phone Number is of student
Address	VARCHAR(128)	☐	☐	Address of Student
CreatedDate	DATETIME	☐	☐	Created Date is of student account
LastModifiedDate	DATETIME	☐	☐	Last Modified Date
LastLoginDate	DATETIME	☐	☐	Last Login Date of student
InstructorList	VARCHAR(256)	☐	☐	List of All Instructors ID
Active	BINARY(10)	☐	☐	Active or Not

Instructor

Physical Name	Data Type	Req'd	PK	Notes
InstructorID	INTEGER	☑	☑	InstructorID identifies Instructor
LoginName	VARCHAR(32)	☑	☐	Login Name of Instructor
Password	CHAR(32)	☑	☐	Password of Instructor
FirstName	VARCHAR(32)	☐	☐	First Name of Instructor
LastName	VARCHAR(32)	☐	☐	Last Name of Instructor
PhoneNo	CHAR(10)	☐	☐	Phone No of Instructor
Address	VARCHAR(128)	☐	☐	Address of Instructor
CreatedDate	DATETIME	☐	☐	Created Date of Instructor
LastModifiedDate	DATETIME	☐	☐	Last Modified Date
LastLoginDate	DATETIME	☐	☐	Last Login Date
Active	BINARY(10)	☐	☐	Active or Not

Viewer

Physical Name	Data Type	Req'd	PK	Notes
ViewerID	INTEGER	☑	☑	ViewerID identifies Viewer
ViewerPermission	VARCHAR(10)	☑	☑	ViewerPermission partly identifies Viewer
LoginName	VARCHAR(32)	☑	☐	LoginName is of Viewer
Password	CHAR(32)	☑	☐	Password is of Viewer
FirstName	VARCHAR(32)	☐	☐	FirstName is of Viewer
LastName	VARCHAR(32)	☐	☐	LastName is of Viewer
PhoneNo	CHAR(10)	☐	☐	PhoneNo is of Viewer
Address	VARCHAR(128)	☐	☐	Address is of Viewer
CreatedDate	DATETIME	☐	☐	CreatedDate is of Viewer
LastModifiedDate	DATETIME	☐	☐	Last Modified Date
LastLoginDate	DATETIME	☐	☐	Last Login Date
Active	BINARY(10)	☐	☐	Active or Not

Session

Physical Name	Data Type	Req'd	PK	Notes
SessionID	INTEGER	☑	☑	SessionID identifies Session
OrchestraID	INTEGER	☑	☐	OrchestraID is of Session
ViewerPermission	VARCHAR(10)	☐	☐	ViewerPermission is of Session
StudentID	INTEGER	☑	☐	StudentID is of Session
Permission	CHAR(10)	☐	☐	Permission is of Session
Name	VARCHAR(32)	☐	☐	Name is of Session
Description	VARCHAR(128)	☐	☐	Description is of Session
Audio Track	INTEGER	☐	☐	Audio Track is of Session
Lifecycle	INTEGER	☑	☐	Lifecycle is of Session (state includes WIP, DRAFTED, COMMENTED, APPROVED, ACTIVE and EXPIRED)

PerformanceAudioTrack

Physical Name	Data Type	Req'd	PK	Notes
PerformanceAudioTrackID	INTEGER	☑	☑	PerformanceAudioTrackID identifies PerformanceAudioTrack
SessionID	INTEGER	☑	☐	SessionID is of PerformanceAudioTrack
Name	VARCHAR(32)	☐	☐	Name is of PerformanceAudioTrack
Link	VARCHAR(128)	☐	☐	Link is of PerformanceAudioTrack
Channel	INTEGER	☐	☐	Channel is of PerformanceAudioTrack
Instrument	VARCHAR(64)	☑	☐	Instrument is of PerformanceAudioTrack

SessionComments

Physical Name	Data Type	Req'd	PK	Notes
SessionCommentID	INTEGER	☑	☑	SessionCommentID identifies SessionComments
SessionID	INTEGER	☑	☐	SessionID is of SessionComments
UserType	CHAR(1)	☐	☐	'S' for student, 'I' for Instructor
TimeStamp	CHAR(10)	☐	☐	0: overall comments; non-zero: time stamp
TextTrack	TEXT(1000)	☐	☐	Text track for student to leave comments in written regarding its performance at certain time stamp
VoiceTrack	VARCHAR(128)	☐	☐	Voice track for student to leave comments in recorded voice regarding its performance at certain time stamp.
UserID	INTEGER	☑	☐	either Student ID or instructor ID

Orchestra

Physical Name	Data Type	Req'd	PK	Notes
OrchestraID	INTEGER	☑	☑	OrchestraID identifies Orchestra
Name	VARCHAR(32)	☐	☐	Name is of Orchestra
Description	VARCHAR(128)	☐	☐	Description is of Orchestra
MusicScore	VARCHAR(256)	☑	☐	MusicScore is of Orchestra
MusicType	VARCHAR(32)	☐	☐	MusicType is of Orchestra
PerformerGroup	VARCHAR(128)	☐	☐	PerformerGroup is of Orchestra
Conductor	VARCHAR(128)	☐	☐	Conductor is of Orchestra

OrchestraVideotrack

Physical Name	Data Type	Req'd	PK	Notes
VideoTrackID	INTEGER	☑	☑	VideoTrackID identifies OrchestraVideoTrack
OrchestraID	INTEGER	☑	☐	OrchestraID is of OrchestraVideoTrack
Name	VARCHAR(32)	☐	☐	Name is of OrchestraVideoTrack
Link	VARCHAR(128)	☐	☐	Link is of OrchestraVideoTrack

OrchestraAudioTrack

Physical Name	Data Type	Req'd	PK	Notes
AudioTrackID	INTEGER	☑	☑	AudioTrackID identifies OrchestraAudioTrack
OrchestraID	INTEGER	☑	☐	OrchestraID is of OrchestraAudioTrack
Name	VARCHAR(32)	☐	☐	Name is of OrchestraAudioTrack
Link	VARCHAR(128)	☐	☐	Link is of OrchestraAudioTrack
Instrument	VARCHAR(32)	☑	☐	Instrument is of OrchestraAudioTrack
InitialVolume	INTEGER	☐	☐	InitialVolume is of OrchestraAudioTrack
InitialChannel	VARCHAR(2)	☐	☐	InitialChannel is of OrchestraAudioTrack

OrchestraComments

Physical Name	Data Type	Req'd	PK	Notes
SessionCommentID	INTEGER	☑	☑	SessionCommentID identifies OrchestraComments
OrchestraID	INTEGER	☑	☐	OrchestraID is of OrchestraComments
TimeStamp	CHAR(10)	☐	☐	0: overall comments; non-zero: time stamp
TextTrack	TEXT(1000)	☐	☐	Text track for student to leave comments in written regarding its performance at certain time stamp
VoiceTrack	VARCHAR(128)	☐	☐	Voice track for student to leave comments in recorded voice regarding its performance at certain time stamp.

SessionCommentIndexing

Physical Name	Data Type	Req'd	PK	Notes
KeywordID	INTEGER	☑	☐	KeywordID identifies SessionCommentsIndexing
SessionCommentID	INTEGER	☑	☐	SessionCommentID is of SessionCommentsIndexing
TrackType	CHAR(2)	☐	☐	'V' for voice, 'T' for Text, 'VM' for voice track based metadata and 'TM' for text track based metadata
TimeStamp	CHAR(10)	☐	☐	Time stamp where this keywords appear.
Position	INTEGER	☐	☐	Position of where this keywords appear
CommentType	CHAR(1)	☑	☐	'O' as overall comment, 'P' as comments at certain point
IndexID	INTEGER	☑	☑	IndexID identifies SessionCommentsIndexing

KeywordsDictionary

Physical Name	Data Type	Req'd	PK	Notes
Keyword	CHAR(32)	☑	☐	Keyword identifies KeywordsDictionary
KeywordID	INTEGER	☑	☑	KeywordID partly identifies KeywordsDictionary

Here, “Req’d” means the field cannot be NULL. And “PK” is the primary key of that table.