FIRST LEGO League Scoring Software

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National Instruments

FIRST LEGO League Scoring Software

Introduction

- Who am I?
  - Danny Diaz, National Instruments
  - Head Referee, Central Texas FLL
    - Wanted something "more robust" than Excel Sheet
  - FRC Mentor (418, Austin TX)
  - Volunteer developer, offering software for free
    - National Instruments providing LabVIEW for project
  - Not affiliated with *FIRST*

FIRST LEGO League Scoring Software

Introduction

- ## What is the FLL Scoring Software?
  - Application written using NI LabVIEW
    - LabVIEW chosen for determinism over web-based tools
  - Handles competition management duties
    - **Scorekeeping** – Easy to use score entry/validation
    - **Timing** – Functional timer for robot game
    - **Score Displays** – Display score results
  - Used in conjunction with other tools/apps

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Introduction

- What does the FLL Scoring Software NOT do?
  - DOES NOT create competition schedules
    - Bryan Lee (BAE) provides Excel-based Schedule Generator, results used by software
  - DOES NOT do pre/post tournament slideshows
    - e.g. "Winners" slides, Skip Gridley's solution does!
  - DOES NOT handle judging information
    - Skip Gridley provides different solution

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Minimum Requirements

- Windows 2000, XP, Vista
  - Computer capable of running the OS

- Mac OS X 10.4 or better*
  - Computer capable of running the OS
  - Must be Intel-based Mac, No PowerPC support

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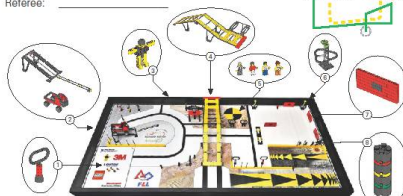
Minimum Technical Knowledge

- Single System (OS Independent)
  - Basic Administration knowledge
    - Admin User Privileges
    - Knowledge of how to use an extended desktop
    - Ability to run a software installer and launch programs
- Remote System (OS Independent)
  - Basic Administration knowledge
  - Basic Networking knowledge
    - Includes basic networking experience

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Components

- Tournament Software Components
  - Score Sheets
    - Paper score sheets for Referees
  - Control Application
    - Provides Timer / Game Clock
    - Handles Score Tracking / Validation
    - Allows networked connectivity to multiple computers
  - Display Application
    - Provides Main/Pit Display of scores/schedule
    - Provides Sponsor Logo Display
    - Displays Timer / Game Clock
  - Bryan Lee's Excel Schedule Generator
  - Skip Gridley's Judging Software

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Configurations

- ## Multiple Configurations
  - ### Single Computer, Single Source
    - Computer Video Plugged Directly Into Projector
    - Only really viable for Laptop w/ exported display
    - Must freeze image on projector frequently

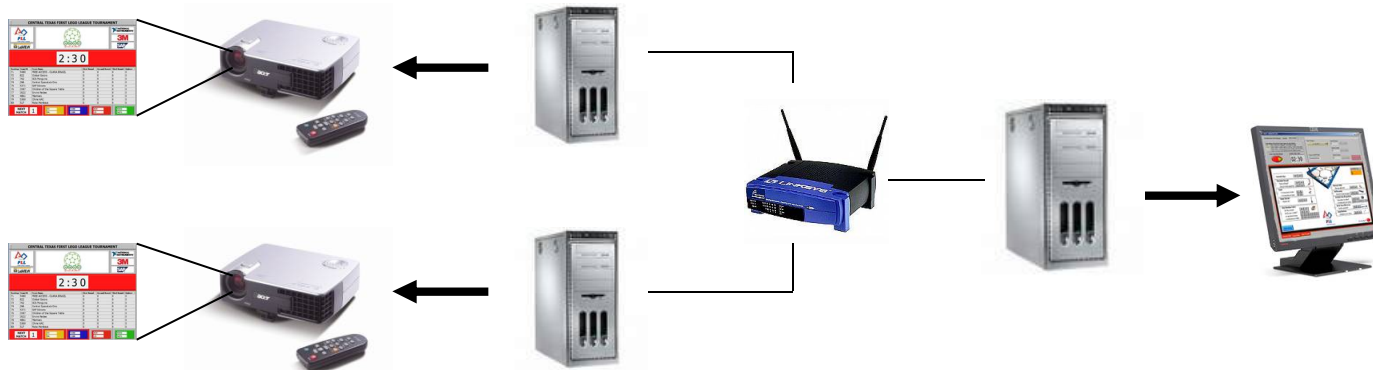*FIRST LEGO* League Scoring Software

Configurations

- Multiple Configurations
  - Single Computer, Multiple Sources
    - One Computer w/ Extended Desktop
    - Main Display Operating Control Application
    - Extended Display Operating Display Application
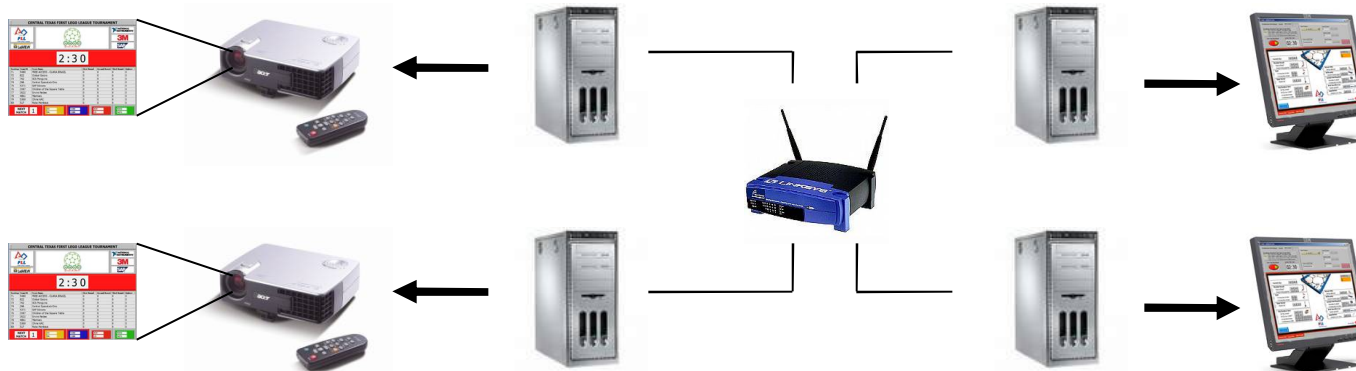

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Configurations

- ## Multiple Configurations
  - ### Remote Computers, Simple Configuration
    - Local System with Score Entry
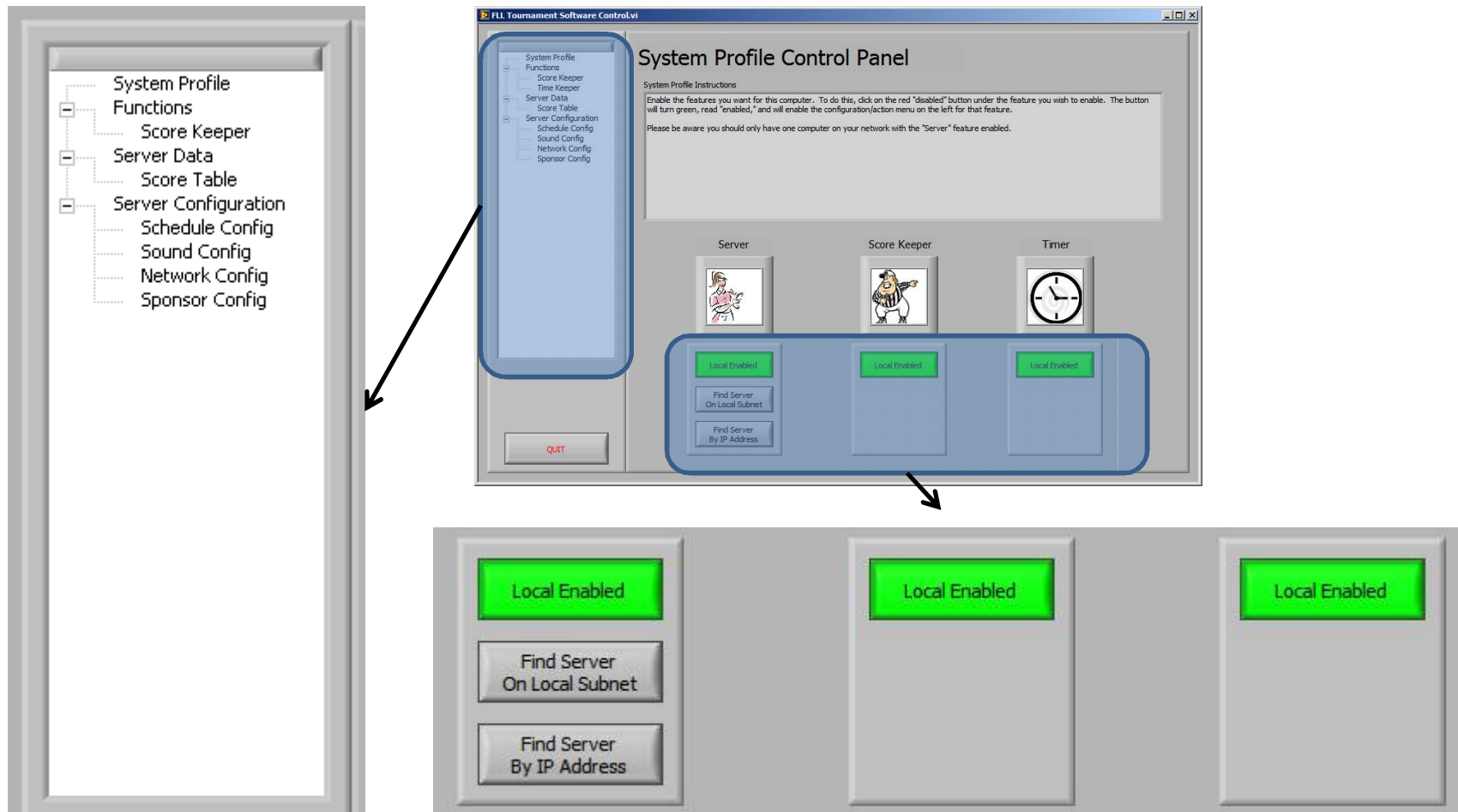   - One or more Networked Systems Using Display App

Configurations

- Multiple Configurations
  - Remote Computers, Advanced Configuration
    - One Networked System for Timer
    - One or More Networked Systems for Score Entry
    - One or More Networked Systems for Display

System Setup / Navigation

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Score Entry

Display / Game Timer*

Sound Configuration

Software Features Not Implementing

- No "native" support of custom configurations
    - Only support 1x1, 2x2, 3x3, ... competition format
- No "Sound Lag" features
    - No timer start/stop before/after sounds

Schedules

- Mid October Initial Release
  - Schedules have shifted due to developer schedules and availability
- Updates through October
  - Adding "creature features"
  - Fixing bugs
- October 27th 7:00 PM EST Software Training
  - Web-enabled training for tournament coordinators
- Software will "freeze" in November unless bugs/issues are found.

Getting Critical Updates

- Notifications / Discussions / Resources
  - FLL Scoring Software YahooGroup E-Mail List
    - FLLTournamentSoftware-subscribe@yahoogroups.com
  - Distributed via FLL FTP Annex
    - ftp://forums.usfirst.org
    - User/pass available from *FIRST*
  - Paper Score Sheets Available Online
    - http://www.centraltexasfll.org/software/2009/

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Getting Support

- Definite support for World Festival
- Definite support for Championship tournaments, pre-tournament help
  - Contact Danny, can provide cell phone number
- Limited support for Qualifiers
- Contact Danny for others
  - danny.diaz@ni.com

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Questions

- Questions?

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