Jacobsen Declaration Exhibit AA

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Model Railroad Computer

Control

(How I am going to write my Train Program)

Matt Katzer
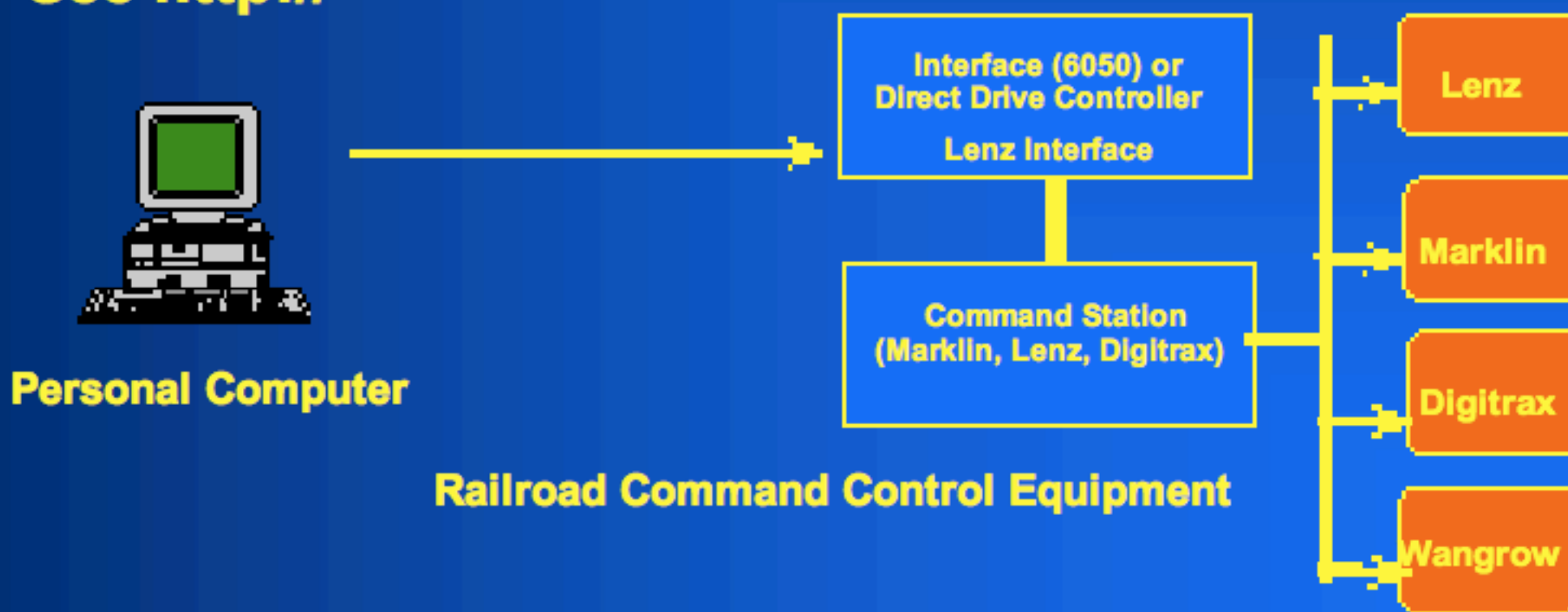## Portland, Or.

KAM

Railroad Requirements

- **Must have NMRA DCC compatible engines**
  - either a Horn, Digitrax, Lenz, Digitrax or
    Wangrow, or old Marklin DC system

- **Two type of interfaces supported**
  - PC/mac compatible serial interface (9.6K)
  - Direct drive support via command station
  - See http://

Personal Computer

Interface (6050) or Direct Drive Controller

Lenz Interface

Command Station (Marklin, Lenz, Digitrax)

Lenz

Marklin

Digitrax

Wangrow

Railroad Command Control Equipment

DCC

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Command Control Software

Three classes of products available

- Mac & Apple

- MS-DOS

- Microsoft Windows

MS-DOS examples

- Marklin shareware apps

- Basic program examples

- Digipert/Digiplus II

Microsoft windows

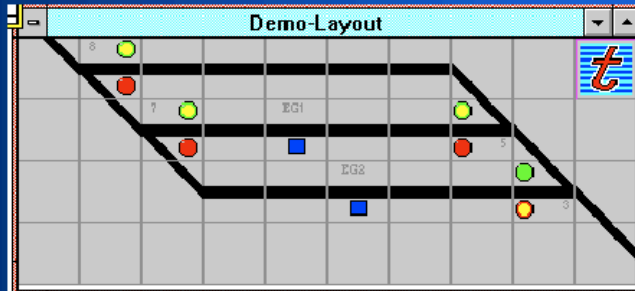- Engine-Commander

- WinLok

- and soon others as well

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WinLok

Design to support Marklin Controllers

- draws from the German railways operation

- supports visual layout display

- multiple user throttles

- integrated acceleration curves

European design/tradeoffs

Demo-Layout

EG1

EG2

5 Re 4/4

Level

Stop   Dir   Fct

S   Clk

DCC

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Engine-Commander **TM**

Built on a modular philosophy
- users can add complexity at their own pace
- simulation interface is include to help other programmers

Good user documentation
- explains the Marklin, Digitrax, Wangrow and Lenz interface in detail

Manual and Sensor control flexibility
- logical to physical mapping of engines/switches
- maintains engine and switch history between sessions

Engine Commander

File   View   Configuration   Run   Help

Ready

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Engine-Commander **TM** Modes

Serial Interfaces supported

- **Marklin 6050/6023 interfaces on AC and DC boosters**
- **Lenz LI-100**
- **Digitrax, Wangrow serial Interface**
- **NMRA serial interface**

NMRA controllers
- Direct drive support for Marklin boosters
- Direct drive support for NMRA extended packet format

Protocol windows for software development

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http://ourworld.compuserve.com/homepages/John_Kabat/

John Kabat's Susanville, Linda Junction & Kay...

File Edit View Go Favorites Help

Address: http://ourworld.compuserve.com/homepages/John_Kabat/

See about our LOCONET FOR DOS Contest!

NOTICE: May 23, 1996 - Contest Dates have changed! See the

Contest Page

We Have a Winner for April: **David Koch** For his **THROTTLE.BAS** program. Congratulations Dave!

What's New

- May 29, 1996 - New version of LOCONET! - changes expiration date to October, 1996!
- May 23, 1996 - Changed closing dates of contest.
- May 7, 1996 - A new update of LOCONET! - bug fixes and better COMM and IRQ detection. **UPDATED**
- April 30, 1996 - We are having problems with EMAIL here at my home site - Please use jobak@telzon.com or 74111.563@compuserve.com. Anyone who nursed the contest please let me know!
- April 23, 1996 - Have added a LOCONET for DOS FAQ
- *Find out about the NEW LOCONET Software Contest !!!!! Rules updated March 13,1995*

Valley Forge NMRA
7/2/2003
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Other DCC web pages...

DCC Hardware

http://www.lenz.com

http://www.digitrax.com

http://www.wangrow.com

http://www.tttrains.com/tttrains/dccdiv.htm

DCC Software:

http://kam.rain.com

http:// ourworld.compuserve.com/homepages/John_Kabat/

DCC information

http://www.tttrains.com/dcc/

http://www.mcs.net:80/~weyand/nmra/

http://www.mcs.net/~dsdawdy/NMRA/dcc.html

http://www.tttrains.com/tttrains/

Matt Katzer
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