



Tank Fermentation Management

A Small Winery Perspective



Michael McNeill – Winemaker, Hanzell Vineyards



KELLER ESTATE

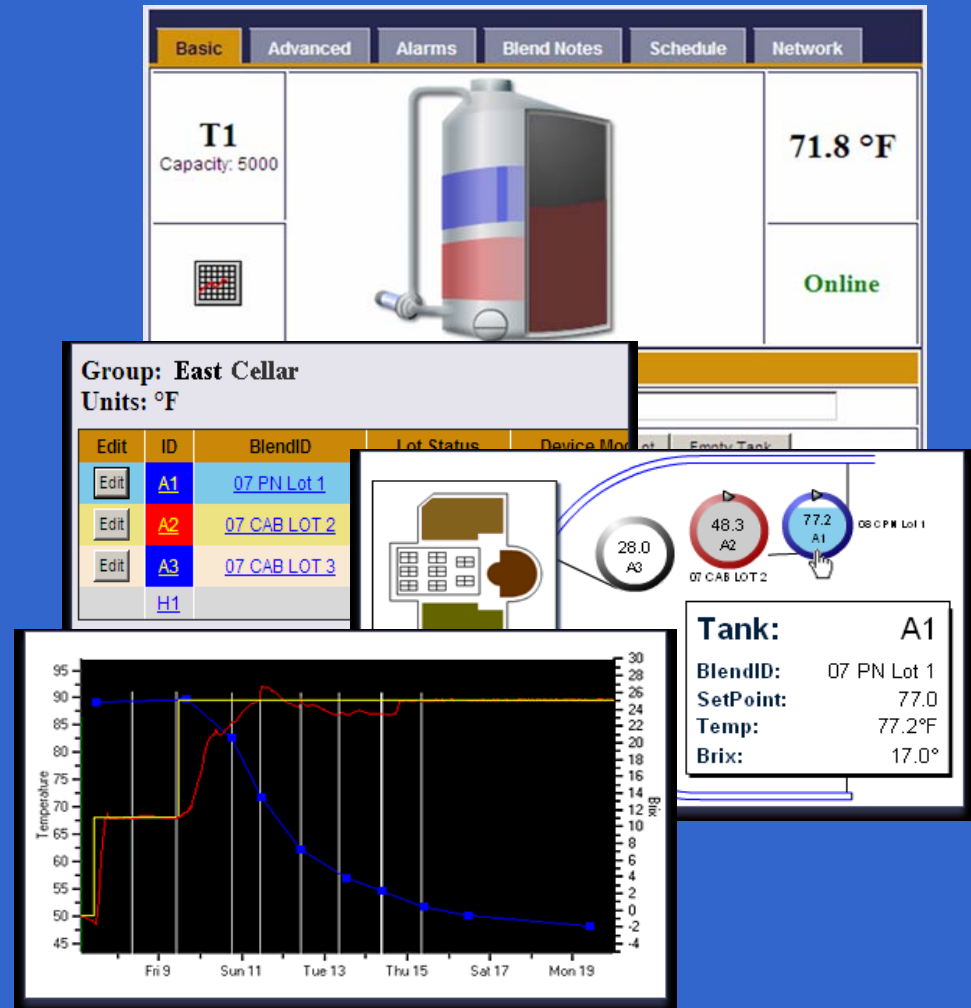
Winemaker 2002-2008



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TANKNET® Key Features



- Calibration-Free Temperature Control
- °Brix & Pump-Over Entry
- Web Browser Access
- Fermentation Graph & Data Export to Excel
- Reporting & Auditing
- Alarm Notifications (cell/email)



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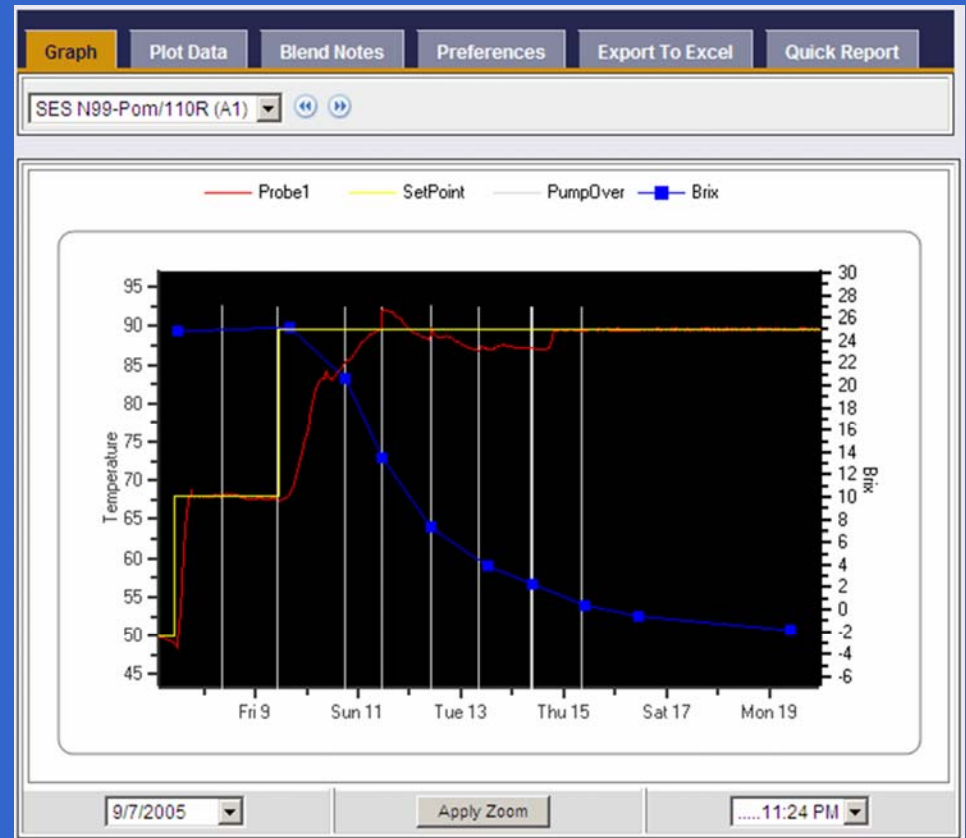
TANKNet® Web Control Panel

- Thermostat Settings
- Lot Code Entry
- Brix Entry
- Alarm Settings
- Scheduling
- Blend Notes

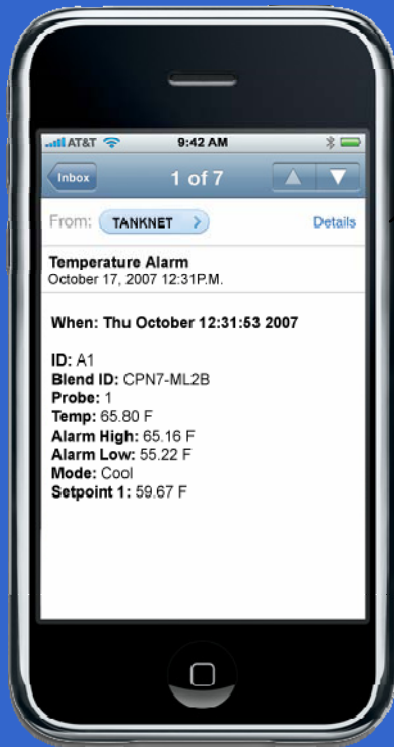
Basic	Advanced	Alarms	Blend Notes	Schedule	Network
T1 Capacity: 5000				71.8 °F	
				Online	
Thermostat Settings					
Description:	<input type="text"/>				
Lot Code:	<input type="text" value="08 CPN-Lot2"/>	<input type="button" value="Move Lot"/>	<input type="button" value="Empty Tank"/>		
Gallons:	<input type="text" value="3000.0"/>				
Lot Status:	<input type="text" value="Cold Soak"/>	<input type="checkbox"/>	Use Lot Status Presets		
Pump Over:	<input checked="" type="radio"/> OFF <input type="radio"/> ON	Duration:	<input type="text" value="15"/>		
Brix	<input type="text" value="22.0°"/>				
Mode:	<input type="text" value="Auto"/>				
Set Point1:	<input type="text" value="70.0"/>	Set Point2:	<input type="text" value="85.0"/>		

TANKNet® Sample Fermentation Graph

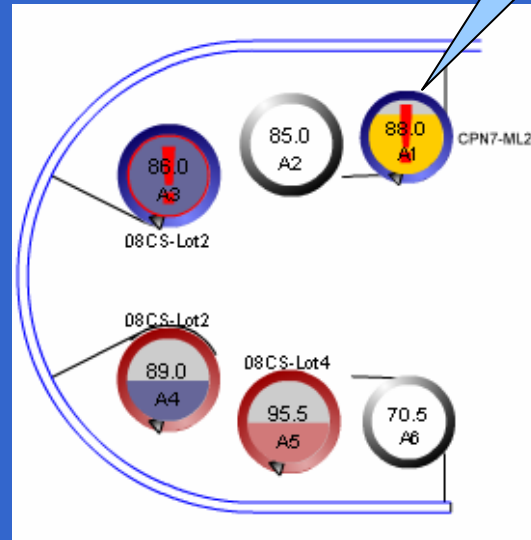
- Fermentation Temperature
- °BRIX
- Pump-over / Punch-down Events
- Set Point / Valve State Changes
- Auto Zoom and X-Y Scaling



TANKNET[®] Temperature Alarm Notifications



Alarm Notification



Alarm Indication

Alarm Detail

Basic Advanced **Alarms** Blend Notes Schedule Network

A1
Capacity: 5000

74.3 °F

Temp Alarm

Alarm Enables

Network Alarms Enabled

Audible Alarm (AUD) Enabled

CC Email: mcneill@hanzell.com

Local Alarms

Enable	Probe	Temperature	Low Alarm	High Alarm
<input checked="" type="checkbox"/>	Probe 1	74.0	55.5	70.0
<input type="checkbox"/>	Probe 2	N/A	N/A	N/A
StratiProbe				

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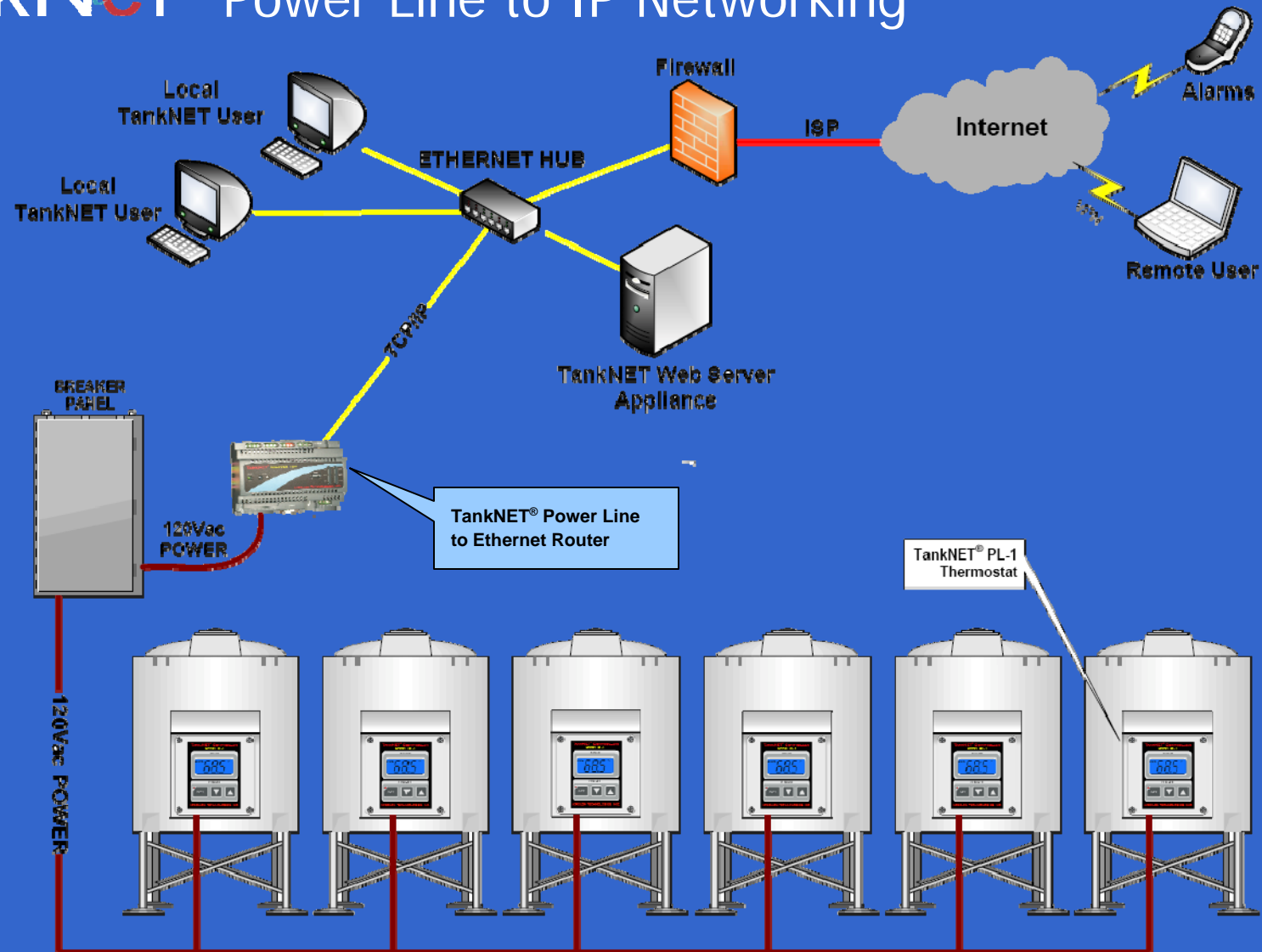
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TANKNET® PL-1 (Wire Less) Thermostat



- Stand-alone, Calibration-Free Temperature Control (*patented*)
- Cool, Heat & Auto Modes
- °Brix / Pump-over Entry
- Simple Programming
- Indoor / Outdoor Rated
- Power Line Networking
(*No Network Wire Required at Tank*)

TANKNET® Power Line to IP Networking



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TANKNET® Power Line Networking

Benefits:

- No Network Cable Required at the tank
- Eliminates Network Cable Installation & Maintenance Costs
- Enables Easy Expansion – new tanks can be installed to existing cellar without consideration of network connectivity
- Facilitates Movement of Portable tanks while maintaining network connectivity
- Proven Communications Technology (LonWorks) used in millions of *smart* electric meters by public utilities, worldwide.