

# TAPROOT® HISTORY

Leading companies around the world use TapRoot® to investigate and fix the root causes of countless mission critical problems:

Major Accidents	Everyday Incidents	Minor Near Misses	Quality Issues
Human Error	Maintenance Problems	Medical Mistakes	Productivity Issues
Manufacturing Mistakes	Environmental Releases		

The TapRoot® System is based on advanced, proven human performance and equipment reliability technology. This knowledge is built into the TapRoot® System so each investigator can take advantage of professional expertise without spending years studying human and equipment performance.

The TapRoot® System, Training, and Software have a long history of R&D and improvement that continues today. We started with six years of research into human performance and the best incident investigation and root cause analysis systems. Then we put our knowledge to use, building a systematic investigation process with a coherent investigation philosophy. We then used and refined the system in the field. We've performed formal user testing and informal focus group appraisals. In 1991, we wrote the first TapRoot® Manual that put all of this experience together into the best incident investigation system: TapRoot®!

But we didn't stop there. We continued improving with feedback from thousands of users worldwide, refining the TapRoot® Book and Courses. And we developed the patented TapRoot® Software to improve investigation productivity. Our groundbreaking research and development, as well as our continuing improvement efforts, are the reasons so many industry leaders worldwide use TapRoot®.

See what TapRoot® Users have to say about their success. Visit our web site ([www.taproot.com](http://www.taproot.com)) and read the Success Stories explaining ways users stopped injuries, saved lives, improved investigation effectiveness and productivity, stopped finger pointing and blame, improved equipment reliability, and fixed operating problems that saved money.

## ADVANCED HUMAN ERROR ANALYSIS

TapRoot® originally focused on human performance, which is still one of its biggest strengths. Mark Paradies, co-developer of the TapRoot® System, became familiar with advanced human factors technology during his studies at the University of Illinois. Mark was in the Nuclear Navy and familiar with the errors operators and mechanics make, even with good procedures and training. He learned theories behind human error and advanced concepts to correct human factors problems.

Advanced human factors concepts often aren't readily accessible to plant personnel, engineers, and managers. They generally aren't trained in human factors. So Mark built these concepts into TapRoot®. Mark and Linda Unger (co-developer) crafted a system that includes advanced human performance concepts without over-the-top complexity and technical jargon.

What advanced human factors concepts does TapRoot® employ? The list would fill this page (for a complete list see [www.taproot.com](http://www.taproot.com)). Here are a few examples:

- |   |  |
|---|--|
| 1. The SOR Model of Human Performance         | 7. Communication reliability practices                       |
| 2. Rasmussen's Skill-Rule-Knowledge Model     | 8. An advanced behavior change model                         |
| 3. Knowledge of Advanced Job Performance Aids | 9. Charles Hopkins' human factors theories                   |
| 4. The Systematic Approach to Training (SAT)  | 10. Chris Wickens' concepts on mental models                 |
| 5. Application of Cockpit Resource Management | 11. James Reason's Swiss Cheese Model of Error               |
| 6. Ergonomics (anthropometrics)               | 12. Paradies/Unger's human performance troubleshooting model |

You don't have to learn these concepts, have a PhD, or hire a human factors expert to take advantage of this technology. Just follow the guidance that TapRoot® provides to find the root causes of human error.

If you are interested in advanced human performance technology that can help you stop human error, learn the TapRoot® System and apply it to fix the root causes of human error.



## 2-Day TapRoot® Incident Investigation & Root Cause Analysis Course

To see full course schedule, visit [www.taproot.com/courses](http://www.taproot.com/courses)  
1.6 CEUs 2 CIH CM Pts Course Fee: \$1195 USD

Halifax, NS, Canada	September 24-25
Knoxville, TN	Sep 30-Oct 1
Hartford, CT	October 1-2
Denver, CO	October 8-9
New Orleans, LA	October 8-9
Pittsburgh, PA	October 15-16
Calgary, AB, Canada	October 21-22
Houston, TX	November 12-13
Edmonton, AB, Canada	December 2-3
Las Vegas, NV	December 8-9

## 5-Day TapRoot® Advanced Root Cause Analysis Team Leader Training (Includes Software)

To see full course schedule, visit [www.taproot.com/courses](http://www.taproot.com/courses)  
4 CEUs 7.52 CIH CM Pts Course Fee: \$2595 USD

Portland, OR	October 20-24
Orlando, FL	October 20-24
Tulsa, OK	October 20-24
Edmonton, AB, Canada	November 3-7
Vancouver, BC, Canada	November 10-14
Lake Charles, LA	November 10-14
St. John's, NL, Canada	November 10-14
Calgary, AB, Canada	December 8-12
Houston, TX	December 8-12

## Equipactor®/TapRoot® Equipment Troubleshooting & Root Cause Analysis Course

To see full course schedule, visit [www.taproot.com/courses](http://www.taproot.com/courses)  
2.4 CEUs 4.01 CIH CM Pts Course Fee: \$1995 USD (Incl. Software)

Knoxville, TN	Sep 30-Oct 2
New Orleans, LA	October 14-16
Houston, TX	November 12-14

Dates and locations subject to change. Prices are for courses in USA.  
For international course prices see: [www.taproot.com/courses](http://www.taproot.com/courses)  
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# How Do You FIND ROOT CAUSES?



DON'T WASTE YOUR TIME WITH SPIN-A-CAUSE™!

CHOOSE TapRoot®, GLOBAL LEADER IN ROOT CAUSE ANALYSIS.

# TapRoot®

Changing the way the world solves problems

[www.taproot.com](http://www.taproot.com)



## 2-DAY TapRoot® INCIDENT INVESTIGATION & ROOT CAUSE ANALYSIS

1.6 CEUs 2 CM Pts Fee: \$1195 USD



LEARN WITH INDUSTRY LEADERS  
FROM AROUND THE WORLD

This course is for companies looking to learn the essentials of the TapRoot® System fast. We'll reveal the basic TapRoot® tools you need to perform an effective root cause analysis.

When you use TapRoot®'s proven, systematic process, you'll effectively:

- Find real root causes.
- Avoid the useless blame game.
- Develop effective corrective actions.
- Reduce variations & stop quality problems.
- Prevent injuries and save lives.

Learn how TapRoot® can be used in any industry to solve problems by analyzing incidents or proactively improve with audits and observations.

Course Topics Include:

- Intro & Opening Exercise
- TapRoot® Investigation Process
- SnapCharT® - What Happened?
- Exercise: Draw a SnapCharT®
- Using the Root Cause Tree®
- Find Root & Generic Causes
- Developing Effective Fixes
- SMARTER & Corrective Action Helper® Exercise
- Using TapRoot® Proactively in Audits/Assessments
- Safeguard Analysis & Exercise
- Presenting to Management
- TapRoot® Implementation Tips
- Root Cause Team Exercise

VISIT  
TAPROOT.COM  
FOR MORE!

## 3-DAY TapRoot®/ EQUIFACTOR® EQUIPMENT TROUBLESHOOTING & ROOT CAUSE FAILURE ANALYSIS

2.4 CEUs 4.01 CM Pts Fee: \$1995 USD (Incl. Software)

This course starts with the 2-Day and adds a day of equipment troubleshooting and root cause failure analysis skills.

Our 3-Day course will teach you to stop repeat equipment failures by finding and fixing the failures' root causes.

This course is essential for those interested in improving equipment reliability. It also can help quality and safety investigators who encounter equipment failures as part of the problems they analyze.

This course is based on the advanced technology troubleshooting techniques developed by Heinz Bloch (and licensed by SI) combined with the state of the art TapRoot® Root Cause Analysis System.

Course Topics Include:

- Equipment Troubleshooting Fundamentals
- Equipment Failure SnapCharT®
- Heinz Bloch's Troubleshooting Tables
- Bloch's FRET/Failure Modes Techniques
- Change Analysis for Equipment Troubleshooting
- From Troubleshooting to Root Cause Analysis
- Equipment Root Cause Analysis Exercise

### ONE TapRoot® USER SAYS:

"The entire staff (investigation team, those who made the mistakes, and hospital management) was impressed... TapRoot® helped people focus on what happened and what could be done to improve performance, rather than focusing on who to blame."

-GOOD SAMARITAN HOSPITAL

## 5-DAY TapRoot® ADVANCED ROOT CAUSE ANALYSIS TEAM LEADER TRAINING

4 CEUs 7.52 CM Pts Fee: \$2595 USD (Incl. Software)

This course is the one for those who want to be the expert in using TapRoot® at their site. Learn all the power behind the TapRoot® System including all the optional investigation techniques.

The course includes the essential TapRoot® techniques plus advanced root cause analysis skills and the nuances of the Root Cause Tree®. Return to work ready to tackle difficult investigations because everything you learn is reinforced using exercises based on real incidents. Plus, as you learn, get guidance from expert root cause analysis instructors with extensive industry experience.

Return to work, ready to stop accidents by applying effective investigation tools and proactive audits.



LEARN ROOT CAUSE ANALYSIS  
FROM EXPERT INSTRUCTORS

Course Topics Include:

- Everything from the 2-Day, plus...
- Collecting Information
- 14-Step Cognitive Interview Process
- Critical Human Action Profile (CHAP)
- How to Analyze Management Systems
- Understanding the Causes of Human Error
- Using Root Cause Techniques Proactively
- How to Change Behavior
- Change Analysis
- Equifactor®
- Safeguards Analysis
- How to Present your Results
- Exercises to reinforce every skill you learn

VISIT  
TAPROOT.COM  
FOR MORE!

## TRAINING GUARANTEE

Attend the training. Use what you've learned. If you and your management don't believe you're finding root causes you previously would have overlooked and developing better corrective actions, just return any course materials and software and **we'll refund your entire course fee.**

## REGISTER NOW!

online: [taproot.com](http://taproot.com)  
phone: 865.539.2139  
email: [info@taproot.com](mailto:info@taproot.com)

## SAVE ON REGISTRATION

### 3 OR MORE ATTENDEE DISCOUNT

Sign up 3 or more at a time,  
**save \$100 per person.**

### LICENSED USER DISCOUNT

Has your site licensed the TapRoot® Software? **Save \$100** on the 2-Day or **\$500** on a 3-Day or 5-Day course fee.

### PREVIOUS ATTENDEE DISCOUNT

Already taken a 2-Day or 3-Day TapRoot® course? Attend the 5-Day and **save \$500.**  
(Max discount \$600.)

## SOFTWARE

Our patented TapRoot® Software keeps your investigation organized, portable, and secure. Create presentation-quality SnapCharT®, guide your investigation with the computerized Root Cause Tree®, develop effective corrective actions with the Corrective Action Helper®, and conveniently connect each element for easy storage.

Single User Version: \$1895 USD  
With 2-Day Course: \$795 USD  
With 3-Day or 5-Day Course: FREE  
Web-based Software also available.