

***FROM FIRE BEHAVIOR TO TEACHING  
FIRE FIGHTING***

Another way to teach ?

*Let's get back...*



Krister Gisselson



***Mid 1980s***



Mats Rosander

- Fire behavior studies
- Introduction of CFBT concept
- Scientists are involved in firefighting training
- Special training devices are introduced (containers, etc...)

## ***Last 20 years***

*We learnt a lot about*

*Fire behavior,*

*Droplets size,*

*Nozzle techniques,*

*Reading smoke,*

*Positive Pressure Attack,*

*.....*

## ***Last 20 years***

***We learnt a lot about***

***Hose stream management,***

***Air track & flow path management,***

***Venting procedures,***

***Suppression procedures,***

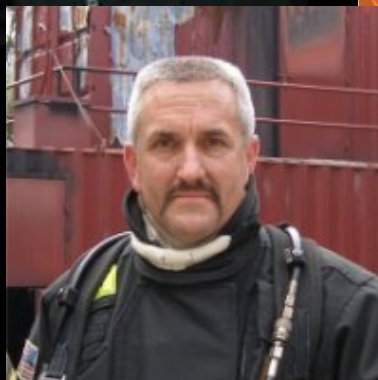
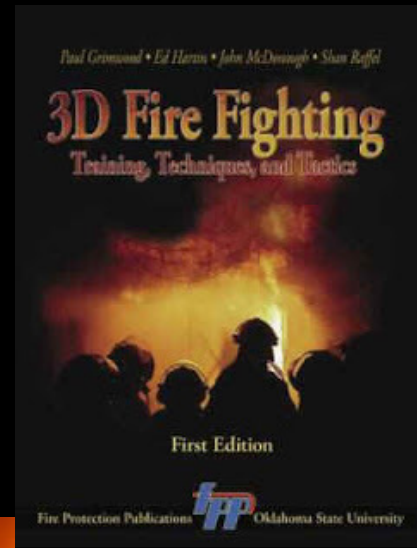
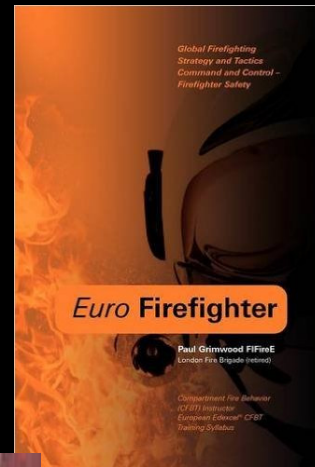
***Thermal Imaging Cameras,***

***Firefighters rescue techniques,***

***Etc...***

# Last 20 years

We learnt a lot thanks to



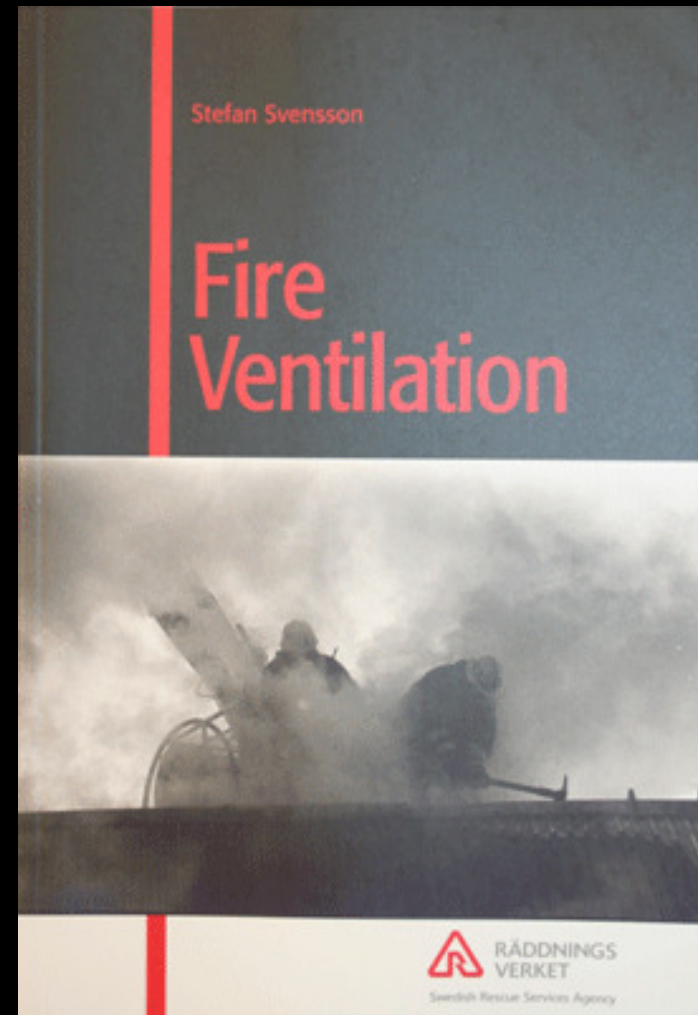
**CFBT-US LLC**

*Not just what and how, but why!*



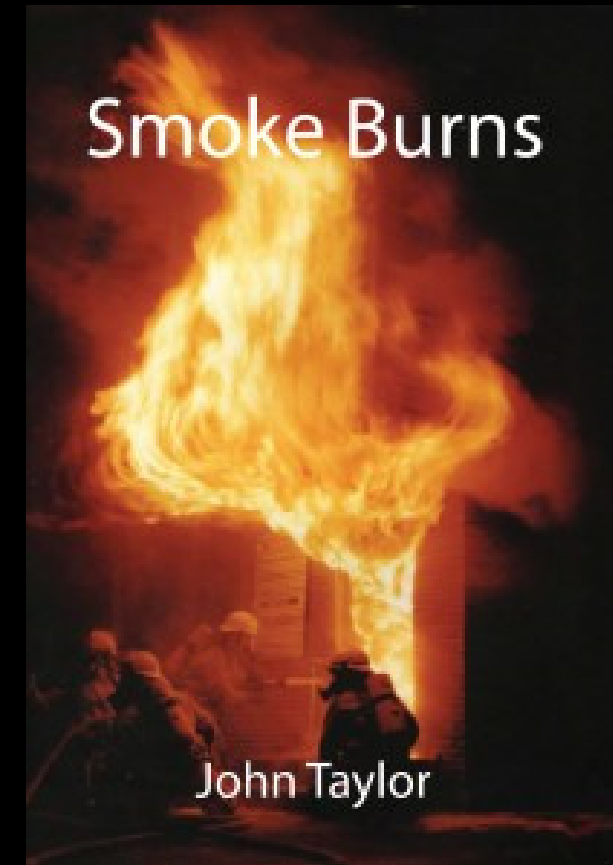
# *Last 20 years*

*We learnt a lot thanks to*



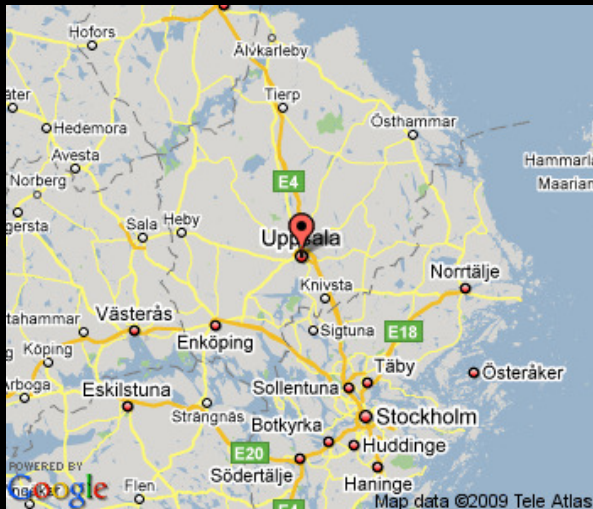
# *Last 20 years*

*We learnt a lot thanks to*



# UPPSALA (Sweden)

1998



## FLASHOVER INSTRUCTORS CERTIFICATE

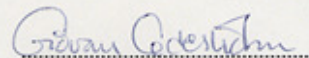
This is to certify that


**Stéphane Morizot**  
**Sapeurs-Pompiers St Quentin en Yvelines**

Has completed  
The Flashover Instructors course  
organised by Uppsala Fire Brigade  
at  
Viktoria education and training centre in Uppsala  
SWEDEN  
1998-11-16---20

**Contents:**

- Fundamentals of fire
- Compartment fire (flashover theories)
- B.A Procedures
- Extinguishing principles and techniques
- Flashover exercises in containers and fire houses
- Safety instructions

  
Head of the Operational Dep.  
ACO Göran Cederholm

  
Chief instructor  
ACO Tommy Törling



# *More recently*

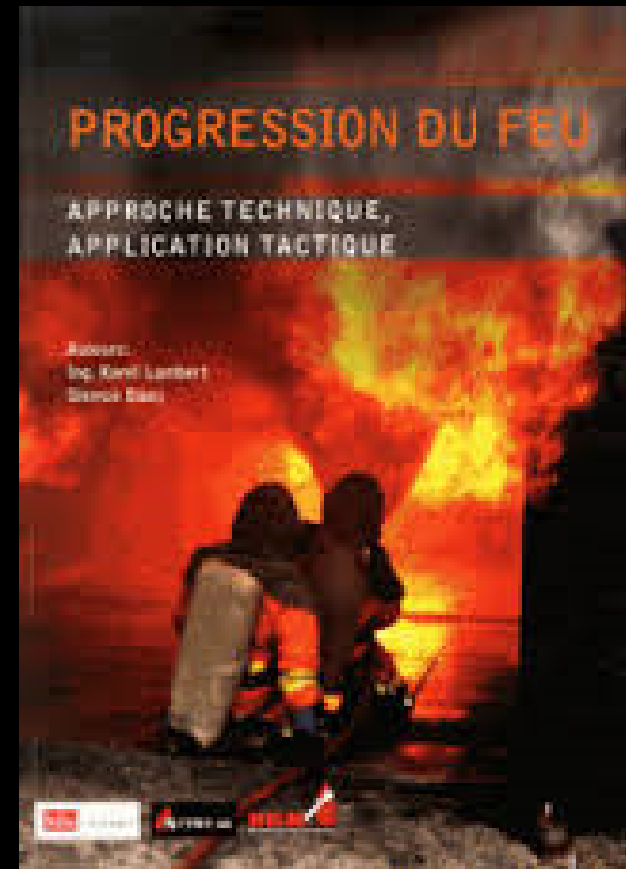
*We learnt a lot thanks to*



**NIST**

# *More recently*

*We learnt a lot thanks to*



# More recently

We learnt a lot thanks to



### PPA Venting for Life Evolution

360° SIZE-UP

FAN SETUP

CHECK FOR INTERIOR CONDITIONS  
FIRE ROOM CONFINEMENT

➔ CALL FOR VENTILATION

FAN STARTED AND POINTING INLET

EXHAUST OPENING

ENTRY OPENING

SAFETY WAITING

AGRESSIVE ATTACK, SEARCH&RESCUE

The diagram shows a fire room layout. A fire is indicated by red flames in the lower-left room. A fan is positioned outside the room, with a red arrow pointing towards the fire. A green dot is located outside the room, and a red dot is located inside the room. A legend at the bottom identifies the colors: green for BACKUP TEAM, orange for ATTACK TEAM, and red for COMMAND.

BACKUP TEAM   ATTACK TEAM   COMMAND

## ***Last 20 years***

***We learnt a lot about***

***Nozzles,***

***Fire apparatus,***

***Fire gears,***

***Additives,***

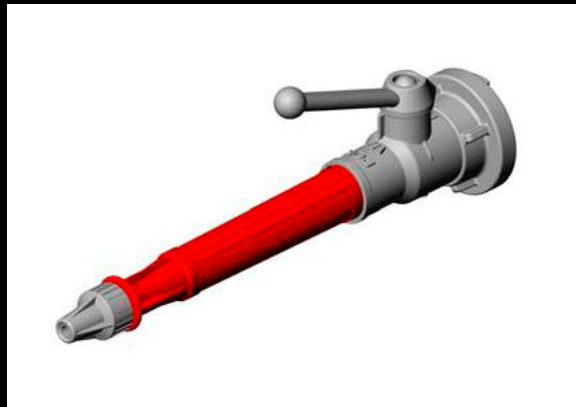
***Breathing apparatus,***

***Thermal Imaging Cameras,***

***Etc...***

# *Last 20 years*

*Tools & equipments improved*



# *Last 20 years*

*Tools & equipments improved*



# *Last 20 years*

*Tools & equipments improved*



*IFIW 2015*

*Last 20 years*

*Tools & equipments improved*





# *Last 20 years*

*SOPs & Standards changed*



***2003***

***French SOPs & Standards changed***

- *National document about Flashover & Backdraft*
- *45 mm hose line recommended for structural fire*
- *Higher attack lines flow rate (500l/mn)*
- *Booster reel length reduced from 80 m to 40 m*

*Our training tools have changed*



*Small scale training devices*

*Our training tools have changed*

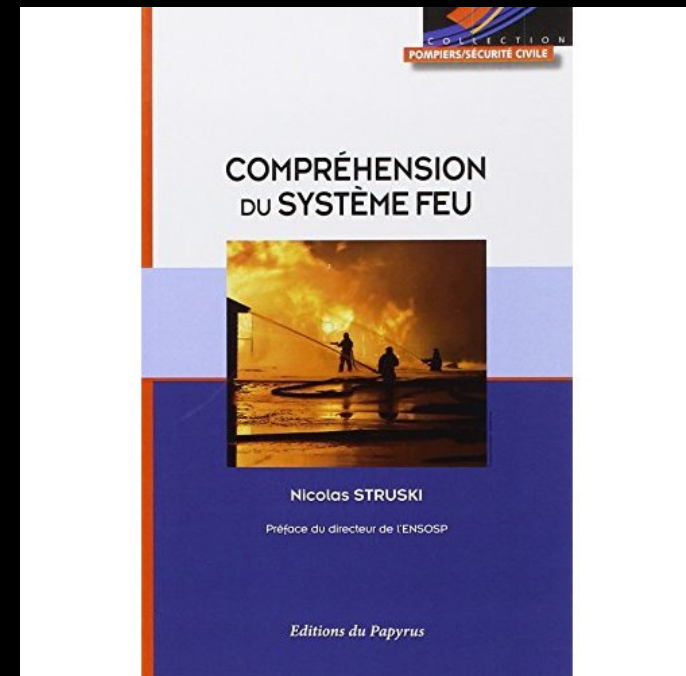
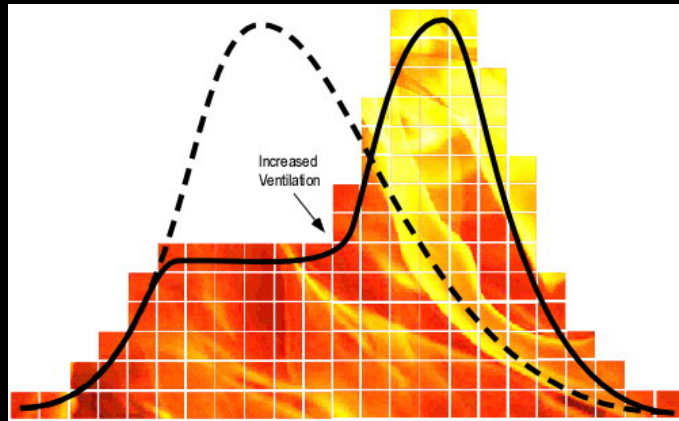
A 3D cutaway diagram of a red fire training structure, showing internal components like a staircase and observation platform.

**FLASHOVER  
SIMULATOR**

3233 E. Corona Avenue  
Phoenix, AZ 85040  
1-877-268-8303  
www.mobilfireunits.com

- 1 - 20' OBSERVATION MODULE
- 1 - 10' INSULATED BURN MODULE
- ADJUSTABLE VENTS
- FIRE DOORS

# *Our training resources have changed*



## *What are the results ?*

- Fire isn't unpredictable
- Firefighters realise firefighting is dangerous
- Firefighting is a very technical job
- Some crews were afraid to get in burning buildings
- Reactions standardized by procedures (robot attitude)

*Why ?*

# **FIREFIGHTERS**

PAUL COMES  
www.paulcomes.com

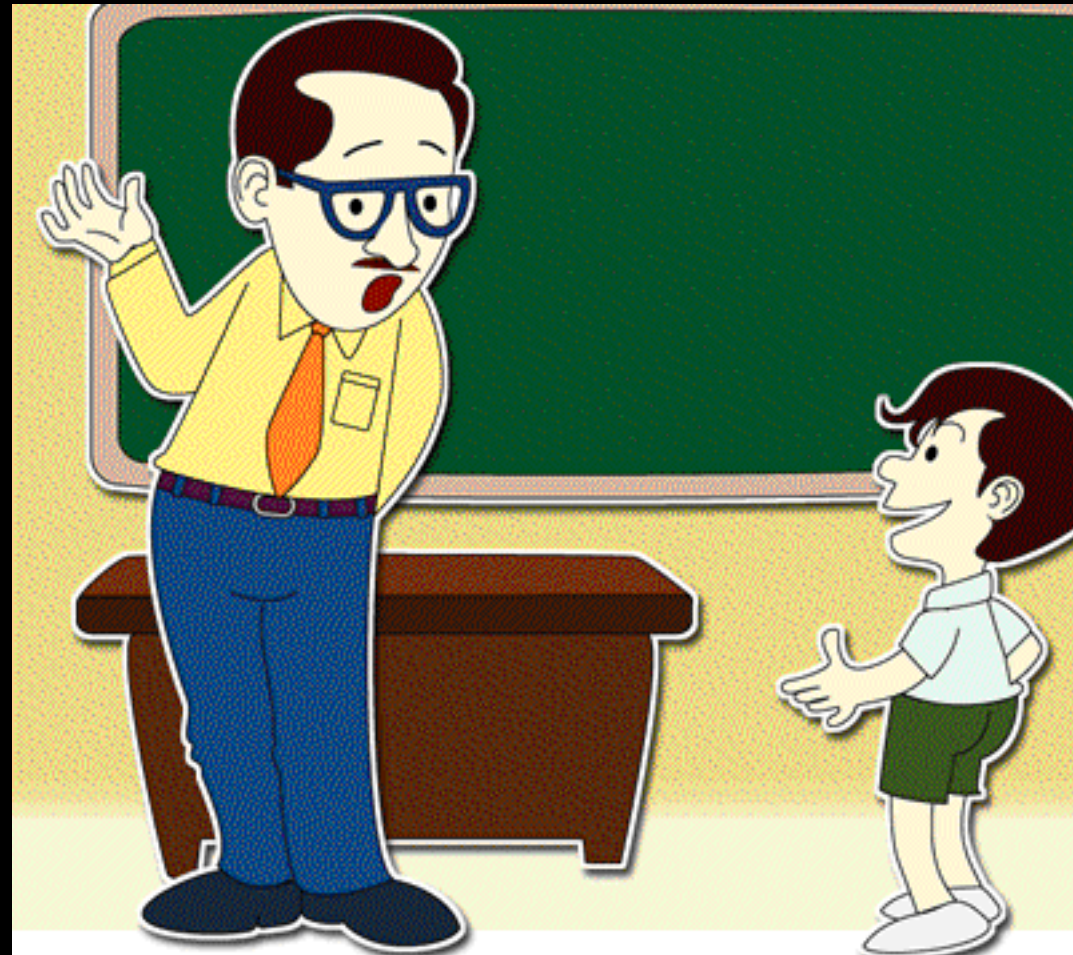


# **THE ULTIMATE MULTI-TOOL**

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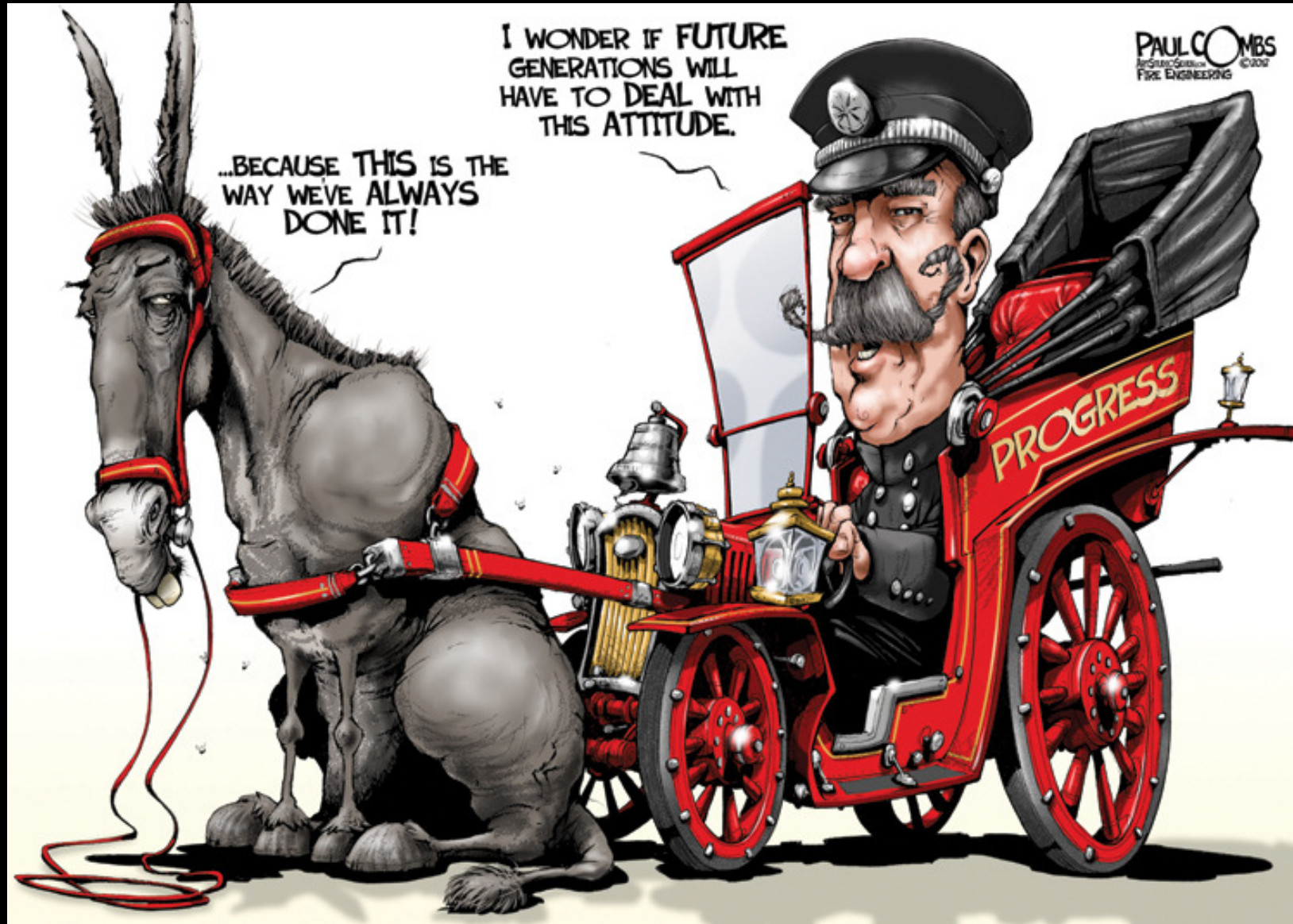


*Teaching method ?*

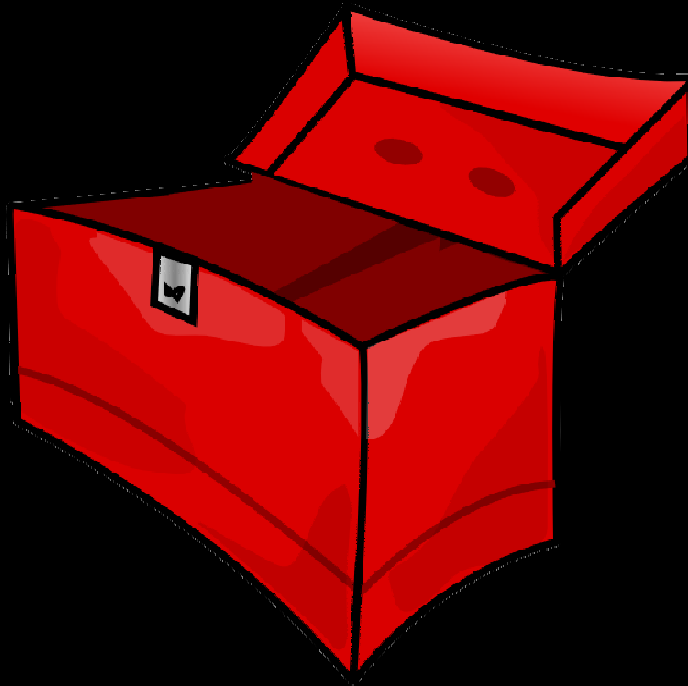


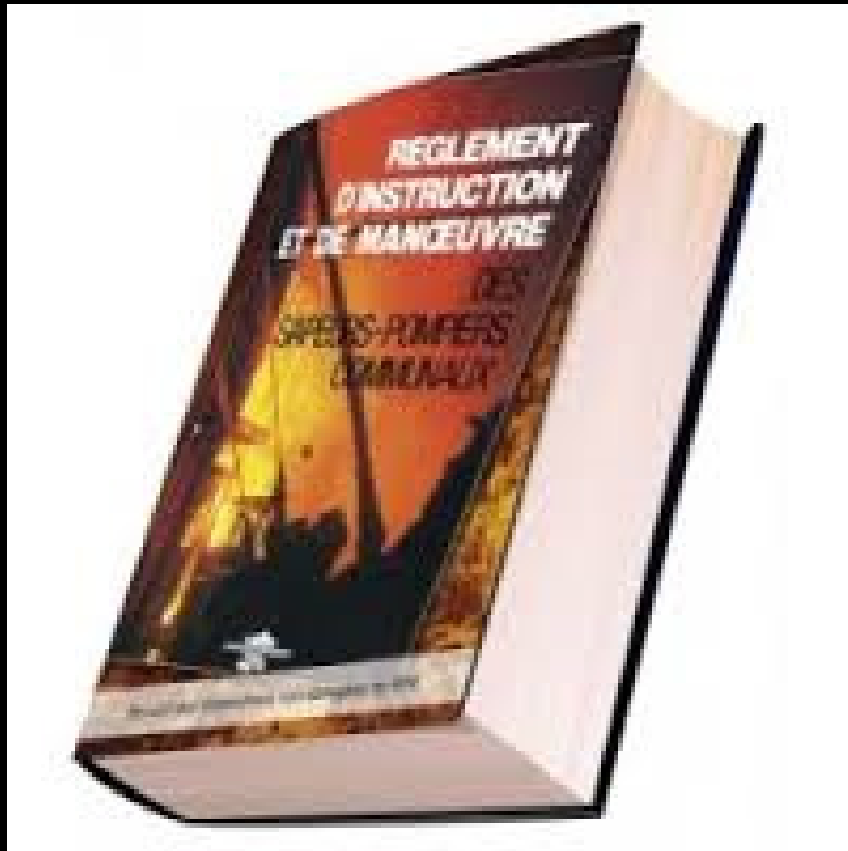
*Historical background*





***Yes box***





- Operational Procedures
- Rules
- Documents

*« In order to carry on your business properly, it is necessary for those who practise to understand not only what they have to do but why they have to do it and the whole course of my instructions is framed to lead to this end.*

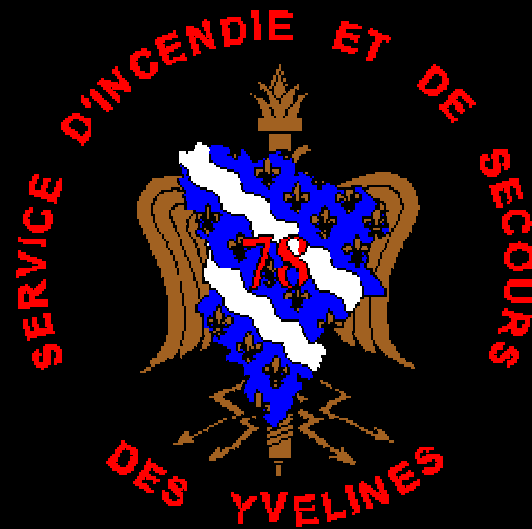
*No fireman can ever be considered to have attained a real proficiency in his business until he has thoroughly mastered this combination of theory and practise. »*

*Sir Eyre Massey Shaw  
Metropolitan Fire Brigade*

*"Fire protection" 1876*

*IFIW 2015*

***SDIS 78***



***Yvelines Fire & Rescue Service***

Service départemental  
d'incendie et de secours



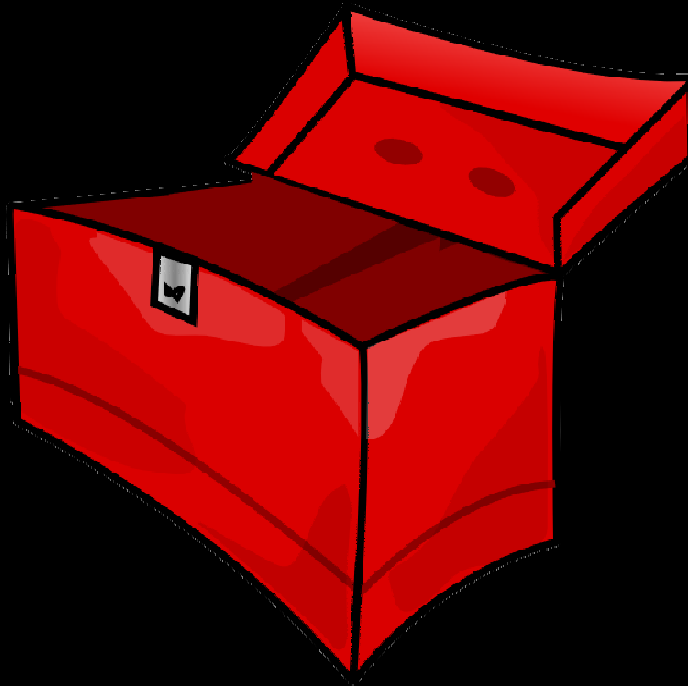
# CFBT Training







***Yes box***



Put students in position to learn by themselves

Briefing defines objectives and targets

Exercice

Student group self analysis

**DEBRIEFING**

## DEBRIEFING

Student at the center of discussion

Speaking time : 70% student

Instructors brings eventual corrections

# *National Fire Academy*

## Understanding Fire System



Students orientated exercises organised by instructors,  
Use of small scale tools,  
Observations defined before exercise commented by students,

**DEBRIEFING**

## « NEW » TRAINING

- More preparation before
- Put students at the center of training sequence
- Leave students debate by themselves and find most answers
- DEBRIEFING

## Positive results

Richest exchanges and feed back

No more « YES » Box

**Help Generate « think before acting »**

**Instructors must change the way to teach**

*IFIW 2015*

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***THANKYOU FOR YOUR ATTENTION***

**Stéphane MORIZOT**

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