



Modern Technology

Transforming

Virtuosos

Into

Conductors

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Report Documentation Page

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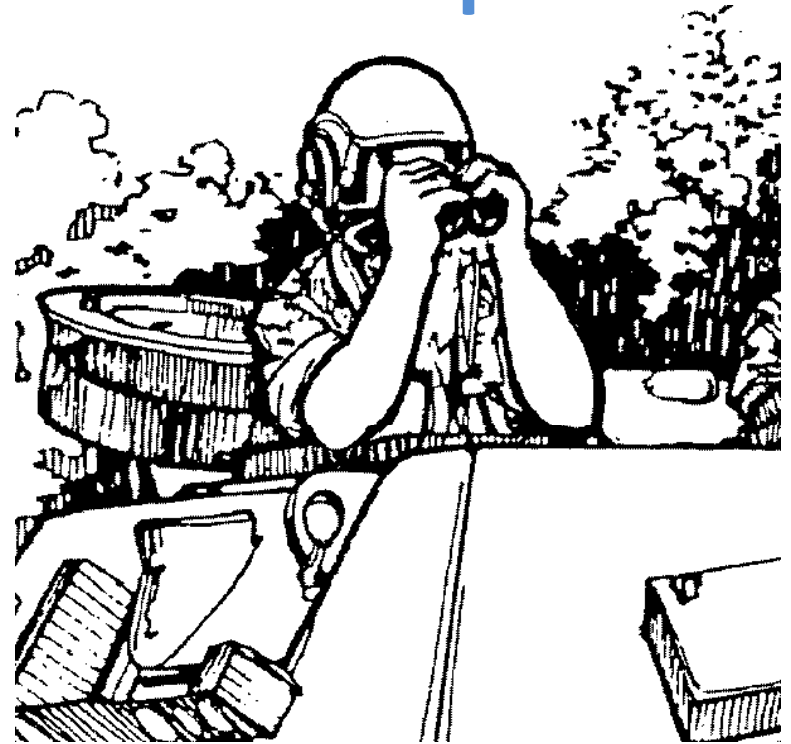
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Virtuoso

a person who has special knowledge or skill in a field

<http://dictionary.reference.com/browse/virtuoso>



A Conductor



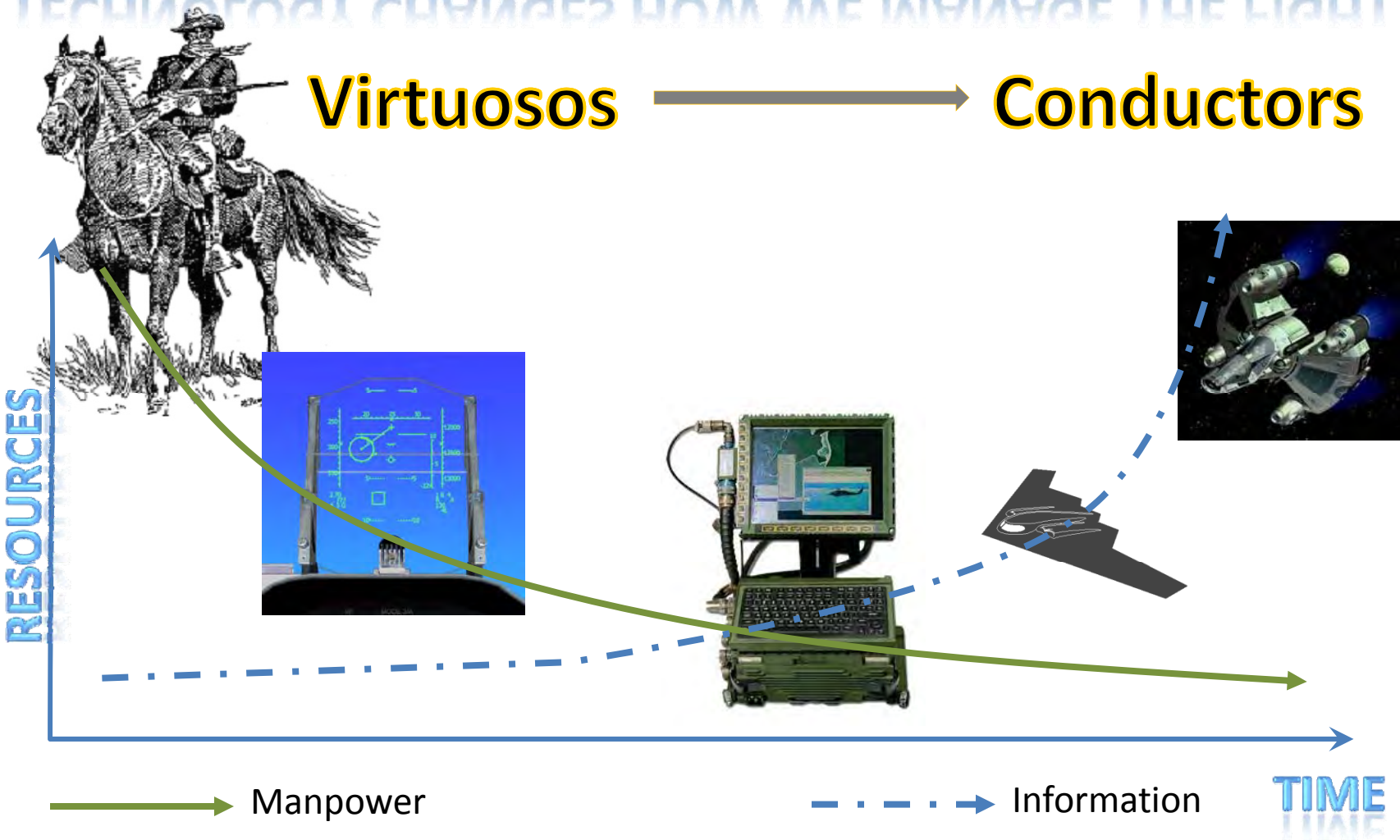
a person who conducts;

a leader, guide,
director, or
manager.



**ONE WHO MARSHALLS MANY RESOURCES TO
ACCOMPLISH THE MISSION AT HAND.**

TECHNOLOGY CHANGES HOW WE MANAGE THE FIGHT



Technology enables the production and delivery of information; making it possible to do more with less in less.

Common Attributes of Tactical Information

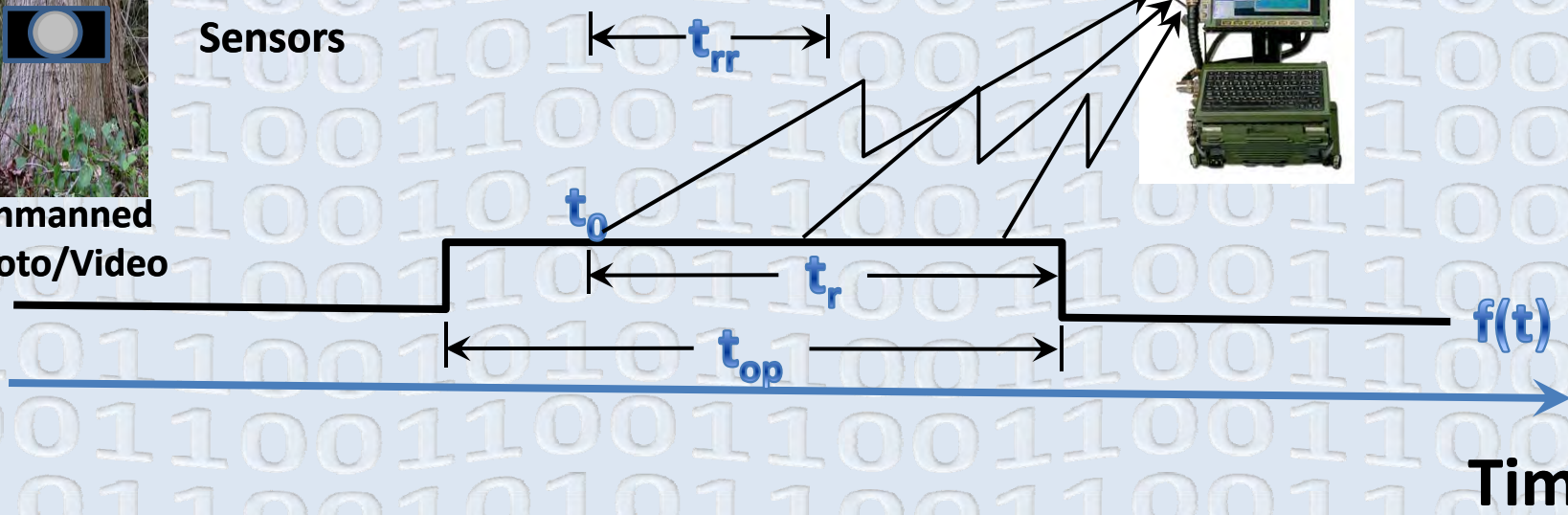
1. Time of Acquisition (t_0)
2. React Time (t_r)
3. Opportunity Time (t_{op})
4. Life Cycle $f(t)$
5. Type
 - a) Current Intelligence
 - b) Target Intelligence
 - c) Common Operational Picture (COP)
 - d) etc
6. Refresh Rate (t_{rr})
7. Source
 - a) Credible
 - b) Questionable
 - c) Unknown
 - d) etc
8. Relative Value

$F(t)$ t_{op} t_0 t_{rr}

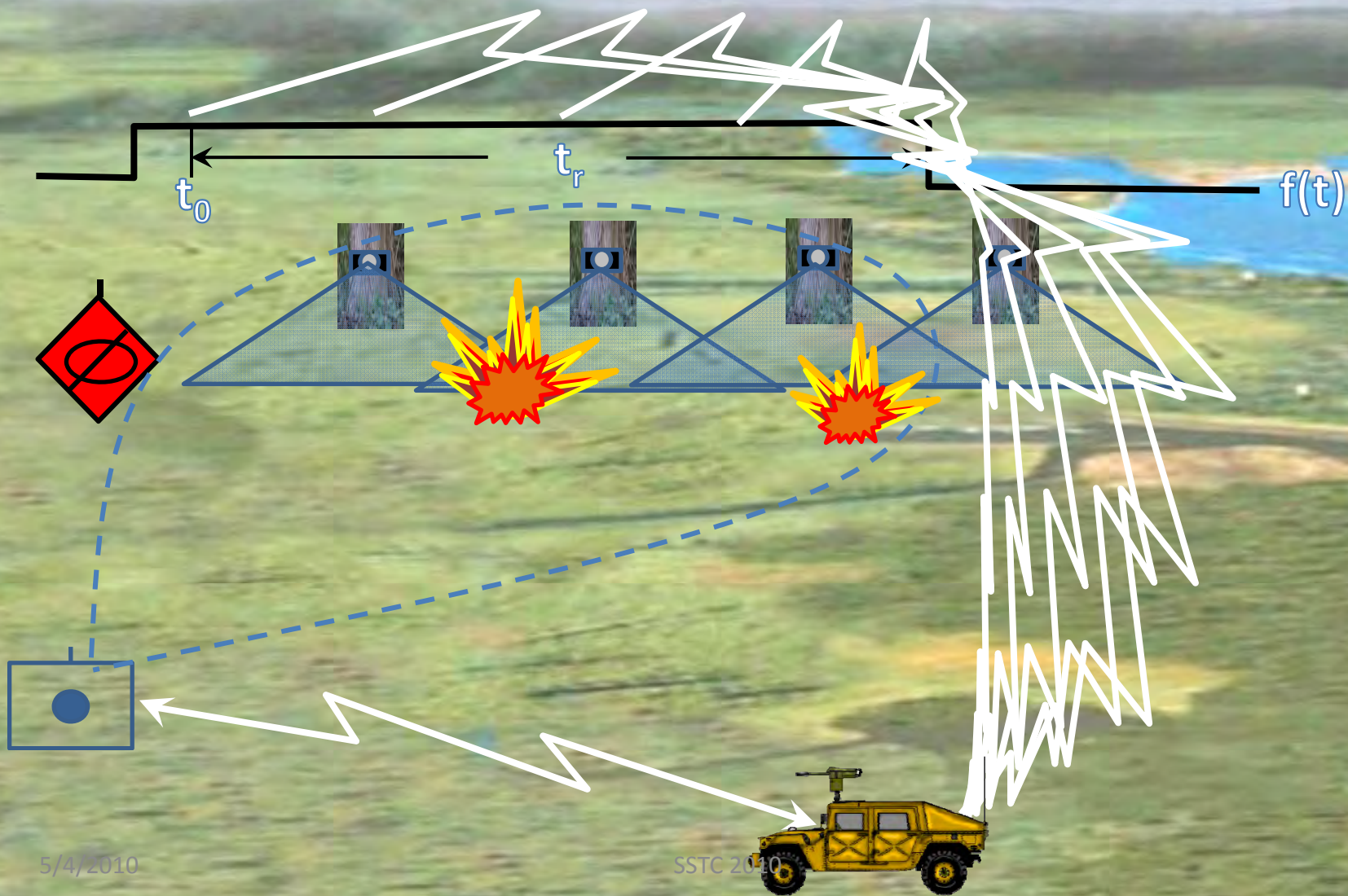


Sensors

Unmanned
Photo/Video

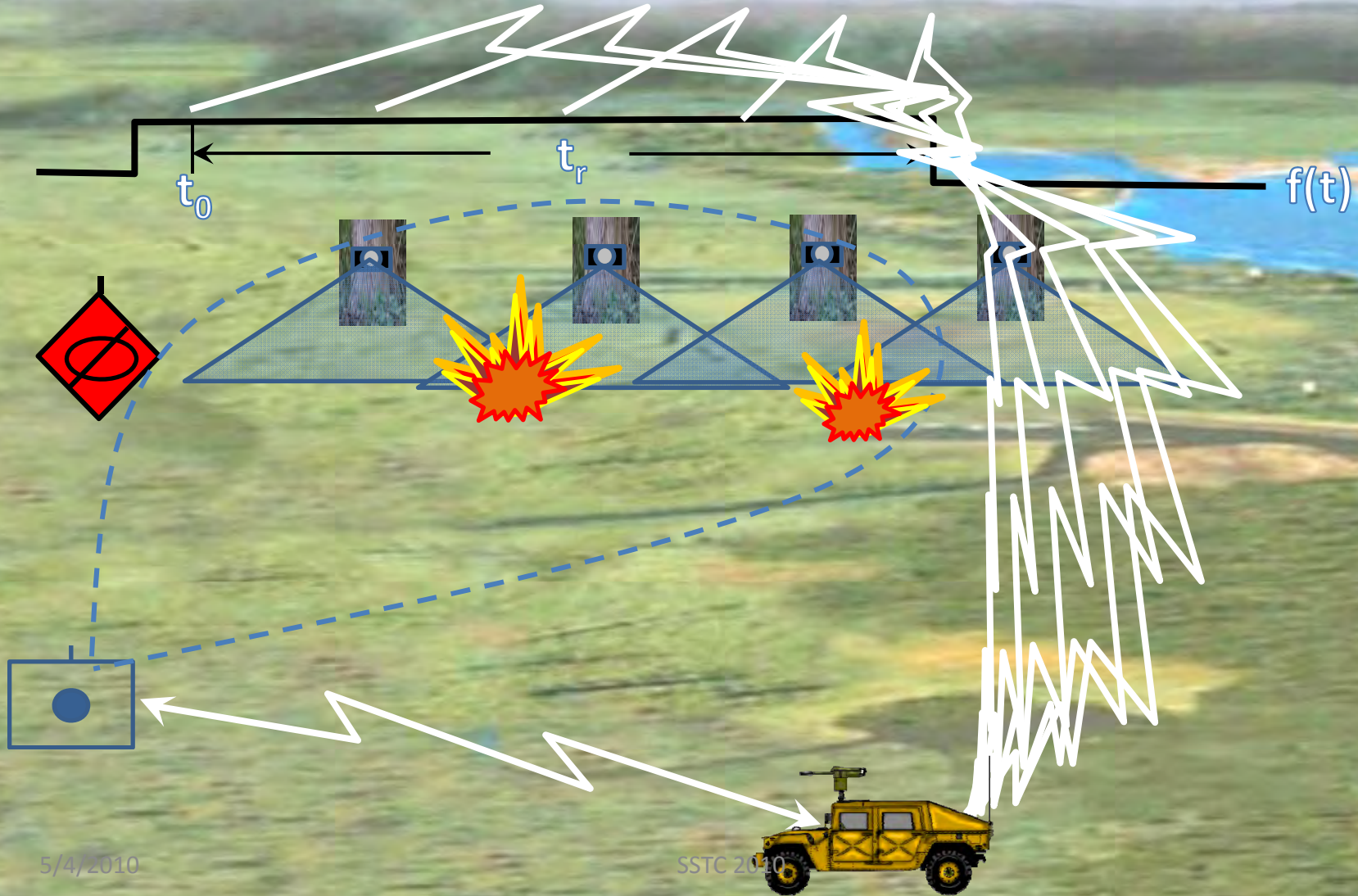


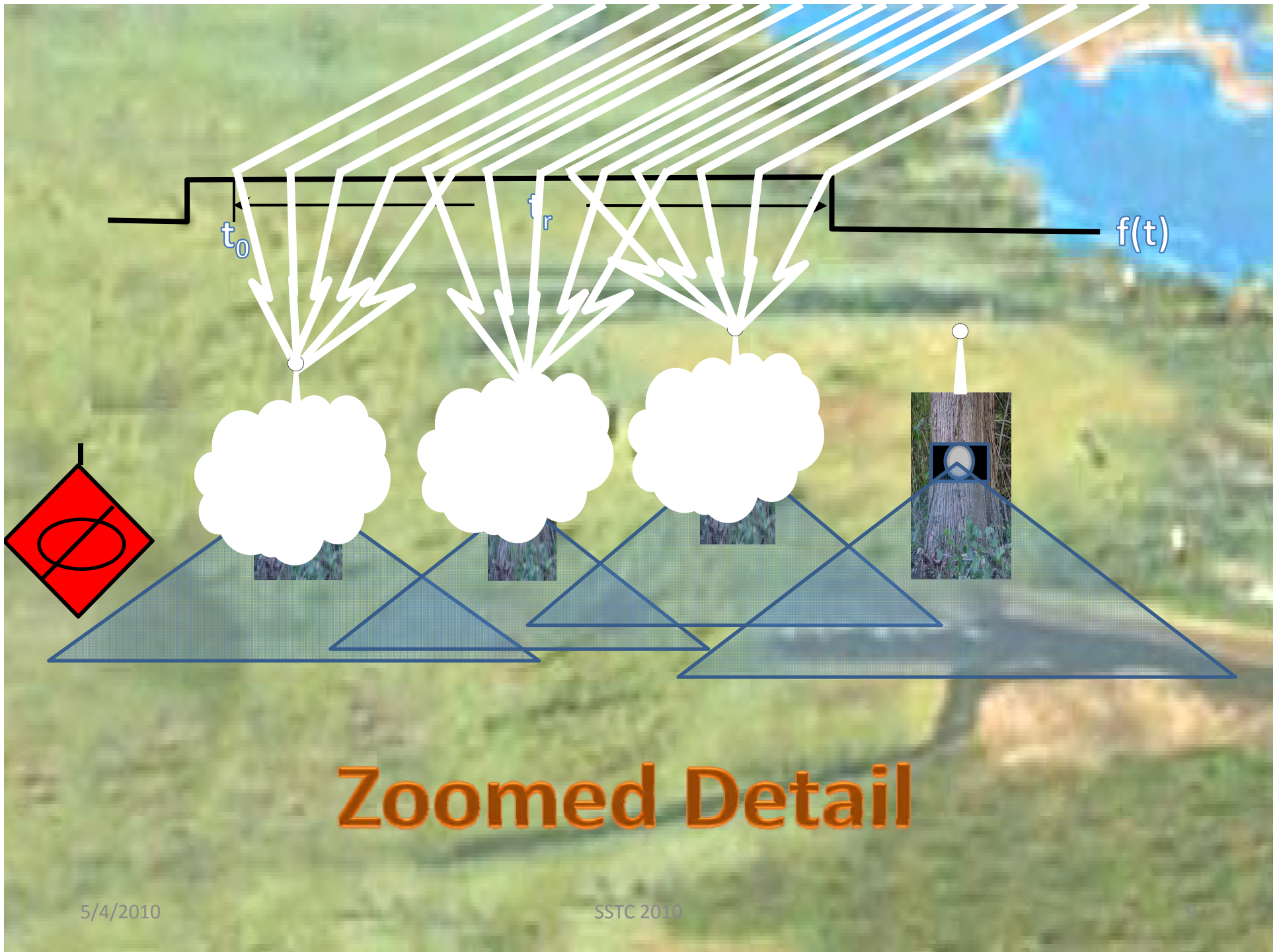
A Simple Example

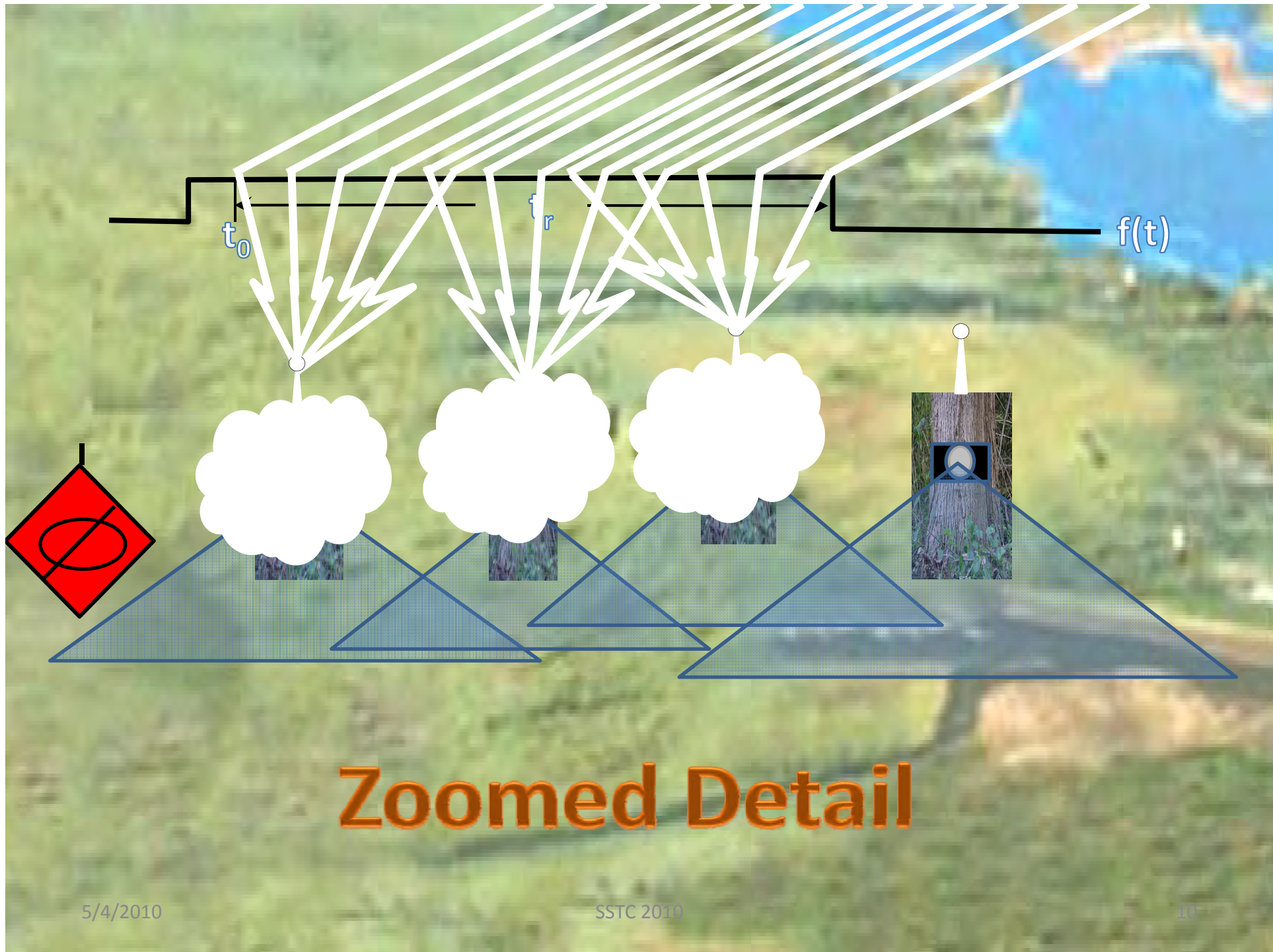


A Simple Example

Stop Action





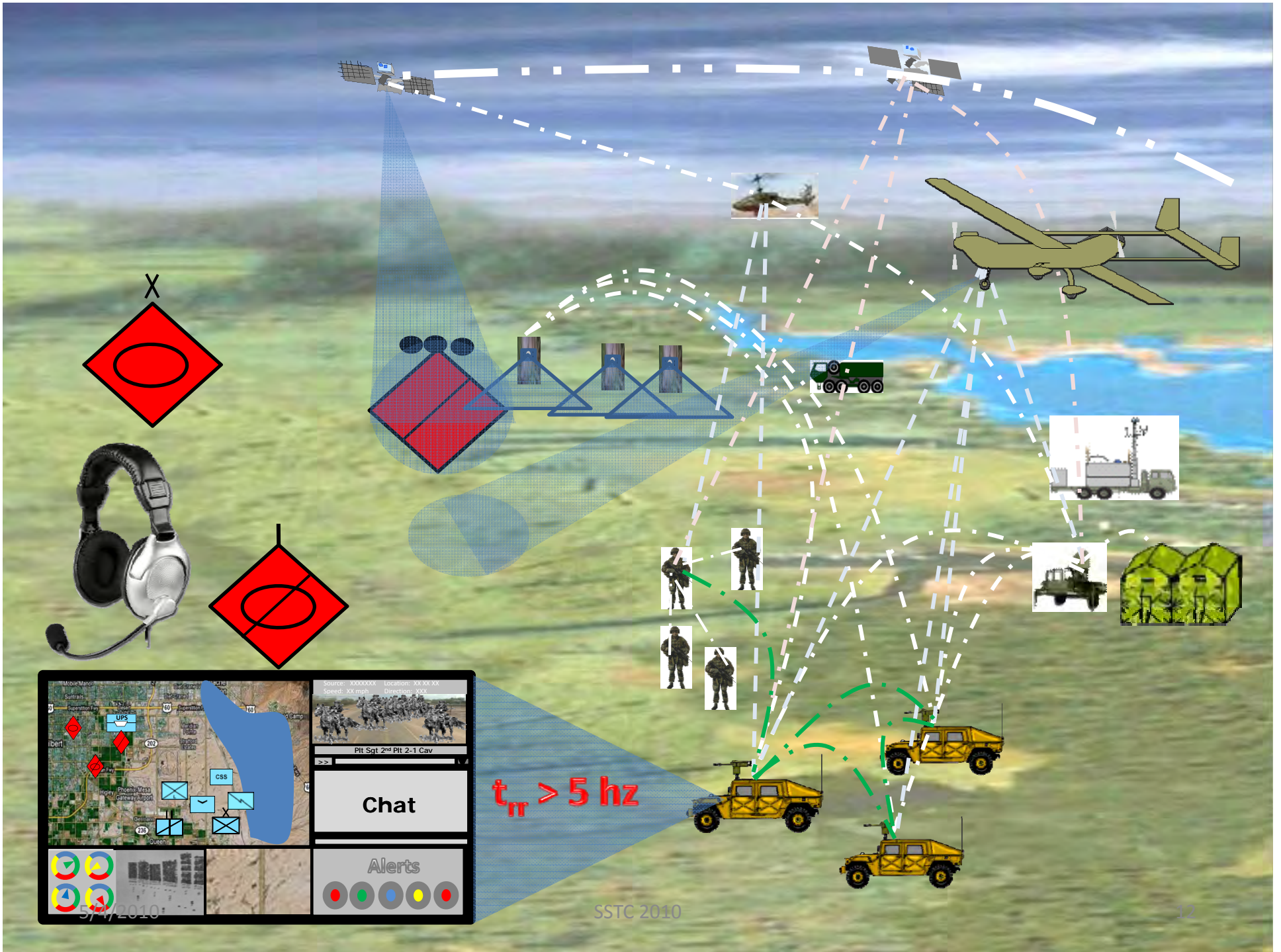


Key Points So Far

It is no longer sufficient for a warfighter to be a weapon system operator

- Must be able to operate weapon system
- Must be able to communicate with other combat team members
- Must be able to **interpret and act** on near real time (small t_{rr}) information feed

Not:
collect,
report,
wait for direction,
execute



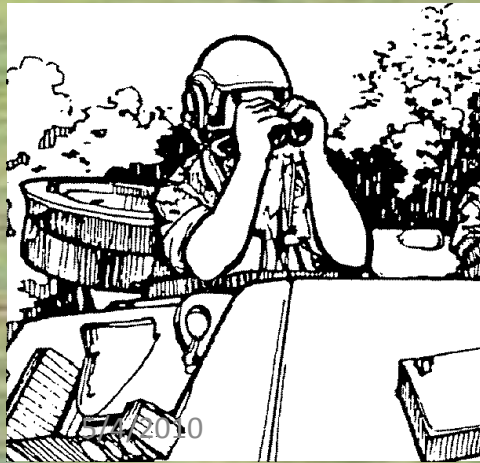


Operate Primary Weapon(s)
 Role Skills & Craft
 Imagery Interpreter (still & video)
 Real Time Δ Image Interpreter

Multi – Tasker (voice, visual, text, audio)
 Information Evaluator
 – source, t_r , t_{rr} , t_{op} , $f(t)$, priority
 Execution Timing



Operate Primary Weapon(s)
 Role Skills & Craft



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In Closing

- Resources have increased:
 - ✓ Multiple Sensor Sources
 - ✓ Information I/O
 - ✓ Collaboration
 - ✓ Warfighter is enabled to do more with less
- Important Points
 - ✓ Not all Information is created equal
 - ✓ Seeing is not necessarily believing
 - ✓ Sensors don't always talk to one another before reporting
 - ✓ Information Overload is a killer in the battlespace
 - ❖ Inhibits decisiveness
 - ❖ Overwhelms the receiver
 - ❖ Jeopardizes the mission
- Don't discount fantasy/Science Fiction
 - Jules Vern - Nuke Subs
 - Robert Heinlein – Starship Troopers
 - George Lucas – Star Wars

In Closing



5/4/2010

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