Communications

- Covered in this Section:
  - Requirements
  - Forms
  - Radios

COMMUNICATIONS

- As a EMTF/EMPF you will be required to have a radio that is compatible to the Incident

- You may be required to check out a radio from the Communications Unit

COMMUNICATIONS

- When checking out a radio from the Communications Unit, you may be required to provide the following information:
  - Name and Agency
  - Order Number
  - Position on Incident
  - Cell Phone number
  - Signature

COMMUNICATIONS

- Incidents may dictate that radios be cloned each and every day due to the addition or removal of radio frequencies available to the incident
- Cloning is the process of updating or programming radios to specific channels and radio frequencies

COMMUNICATIONS

- If required to have your radio cloned, you should always have the Communications Unit perform this task
- The Communications Unit is set up to handle this task and it will ensure proper information is input into the radio

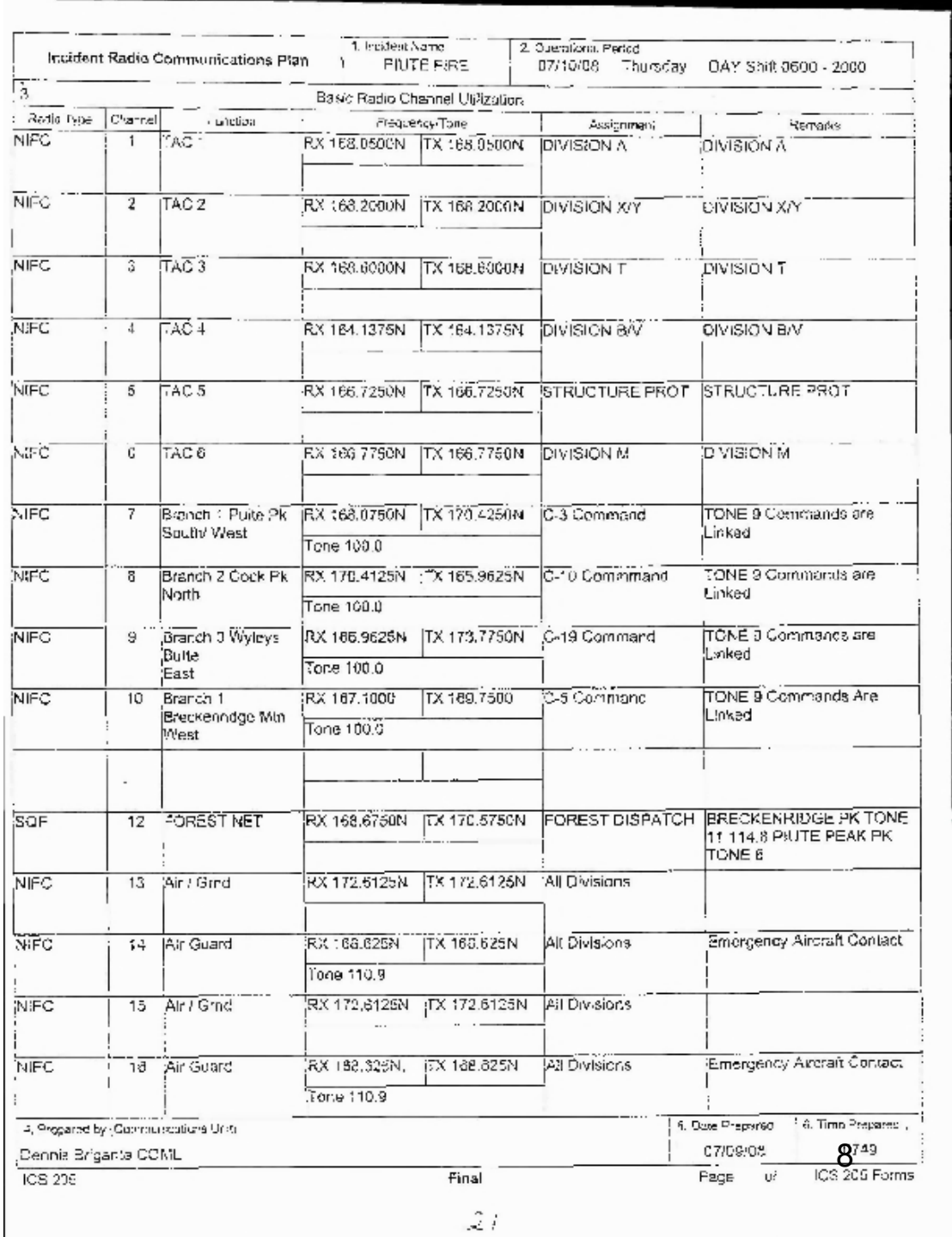
COMMUNICATIONS

- Communications Plan
  - Each incident will have a Communications Plan
  - Completed on a ICS 205 Form
  - Found in the Incident Action Plan (IAP)

COMMUNICATIONS

- Incident Communication Plan will include the following information:
  - Command Net (s)
  - Tactical Frequencies
  - Air to Ground Frequencies
  - Air to Air Frequencies
  - Crew / Dozer Net
  - Logistics Net

ICS 205



Incident Radio Communications Plan	1. Incident Name: PIUTE FIRE	2. Operational Period: 07/10/08 Thursday DAY Shift 0600 - 2000

3. Basic Radio Channel Utilization

Radio Type	Channel	Function	Frequency/Tone		Assignment	Remarks
NIFC	1	TAC 1	RX 168.0500N	TX 168.0500N	DIVISION A	DIVISION A
NIFC	2	TAC 2	RX 168.2000N	TX 168.2000N	DIVISION X/Y	DIVISION X/Y
NIFC	3	TAC 3	RX 168.6000N	TX 168.6000N	DIVISION T	DIVISION T
NIFC	4	TAC 4	RX 164.1375N	TX 164.1375N	DIVISION B/V	DIVISION B/V
NIFC	5	TAC 5	RX 166.7250N	TX 166.7250N	STRUCTURE PROT	STRUCTURE PROT
NIFC	6	TAC 6	RX 166.7750N	TX 166.7750N	DIVISION M	DIVISION M
NIFC	7	Branch 1 Piute Pk South/ West	RX 168.0750N Tone 100.0	TX 170.4250N	C-3 Command	TONE 9 Commands are Linked
NIFC	8	Branch 2 Cock Pk North	RX 170.4125N Tone 100.0	TX 165.9625N	C-10 Command	TONE 9 Commands are Linked
NIFC	9	Branch 3 Wyleys Butte East	RX 166.9625N Tone 100.0	TX 173.7750N	C-19 Command	TONE 9 Commands are Linked
NIFC	10	Branch 1 Breckenridge Mtn West	RX 167.1000 Tone 100.0	TX 169.7500	C-5 Command	TONE 9 Commands Are Linked
SQF	12	FOREST NET	RX 168.6750N	TX 170.5750N	FOREST DISPATCH	BRECKENRIDGE PK TONE 11 114.8 PIUTE PEAK PK TONE 6
NIFC	13	Air / Grnd	RX 172.6125N	TX 172.6125N	All Divisions	
NIFC	14	Air Guard	RX 168.625N Tone 110.9	TX 168.625N	All Divisions	Emergency Aircraft Contact
NIFC	15	Air / Grnd	RX 172.6125N	TX 172.6125N	All Divisions	
NIFC	16	Air Guard	RX 168.625N, Tone 110.9	TX 168.625N	All Divisions	Emergency Aircraft Contact

4. Prepared by: Communications Unit
Dennis Brigante COML

5. Date Prepared: 07/09/08

6. Time Prepared: 1749

ICS 205 Final Page of ICS 205 Forms

COMMUNICATIONS

- ICS 204 – Assignment List
  - Used to list the specific resources assigned to a division or area
  - Will list the specific radio channels and frequencies that are to be used for that specific division or area
  - Should be readily available to EMTF/EMPF's working on the line

ICS 204

1. BRANCH	2. DIVISION/GROUP	**ASSIGNMENT LIST**
3. INCIDENT NAME	4. OPERATIONAL PERIOD DATE _____ TIME _____	

5. OPERATIONAL PERSONNEL

OPERATIONS CHIEF _____ DIVISION/GROUP SUPERVISOR _____

BRANCH DIRECTOR _____ AIR TACTICAL GROUP SUPERVISOR _____

6. RESOURCES ASSIGNED THIS PERIOD

STRIKE TEAM/TASK FORCE. RESOURCE DESIGNATOR	EMT	LEADER	NUMBER PERSONS	TRANS. NEEDED	PICKUP PT./TIME	DROP OFF PT./TIME

7. CONTROL OPERATIONS

8. SPECIAL INSTRUCTIONS

9. DIVISION/GROUP COMMUNICATIONS SUMMARY

FUNCTION		FREQ.	SYSTEM	CHAN.	FUNCTION		FREQ.	SYSTEM	CHAN.
COMMAND	LOCAL				COMMAND	LOCAL			
	REPEAT					REPEAT			
DIV./GROUP TACTICAL					GROUND TO AIR				

PREPARED BY (RESOURCE UNIT LEADER)	APPROVED BY (PLANNING SECT. CH.)	DATE	TIME

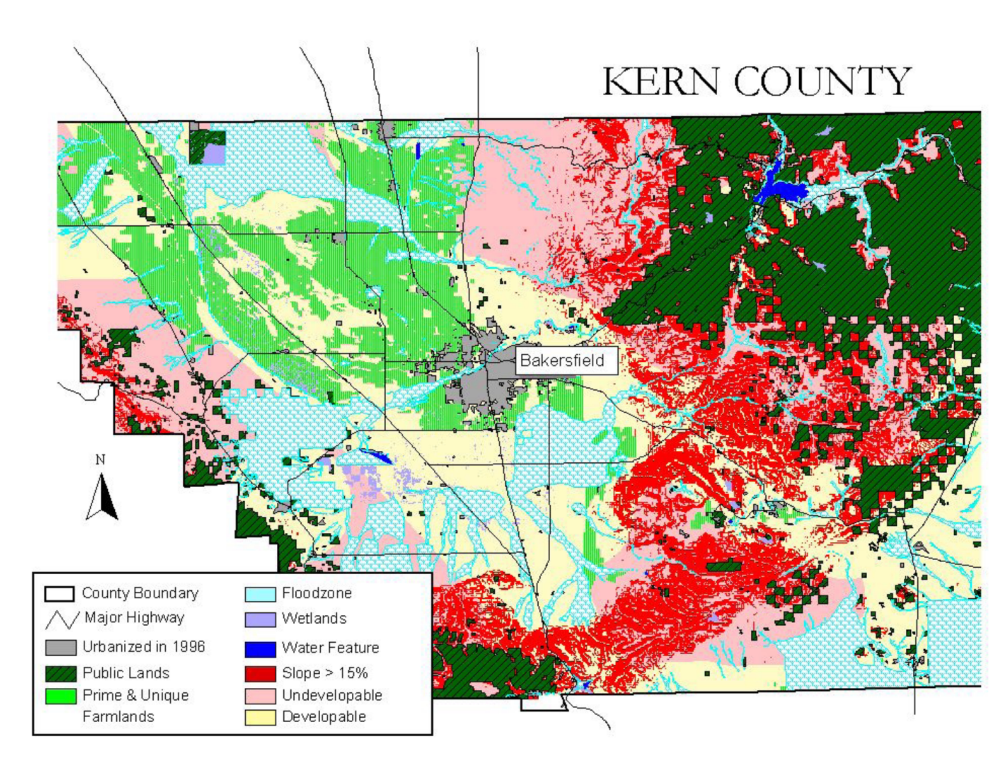
RADIOS

- Interference and Signal Loss
  - There are numerous factors that can affect radio transmissions that can lead to dangerous conditions during a fireline emergency

Terrain

The terrain plays a very important role in radio reception and transmission. Incidents occur in the mountains, valleys, desert, ocean, islands, urban, wildland, etc.

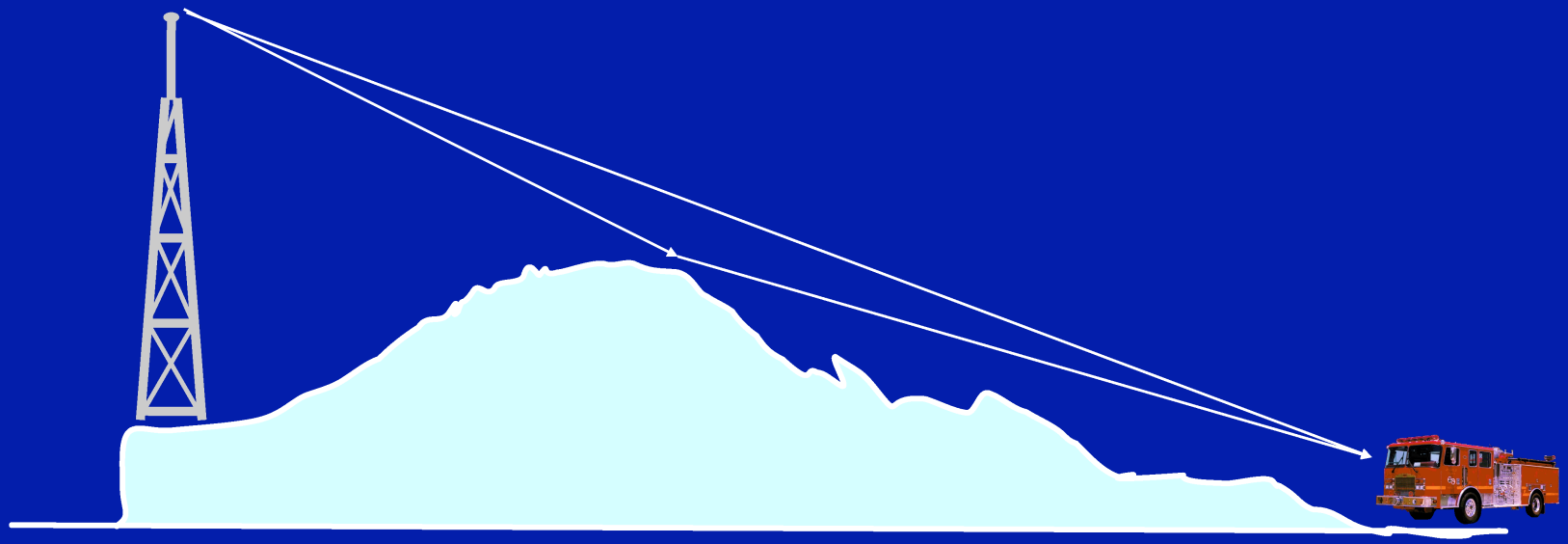
All of these environments provide their own special operational considerations and limitations.



Now, let's take a closer look at radio systems and operational considerations.

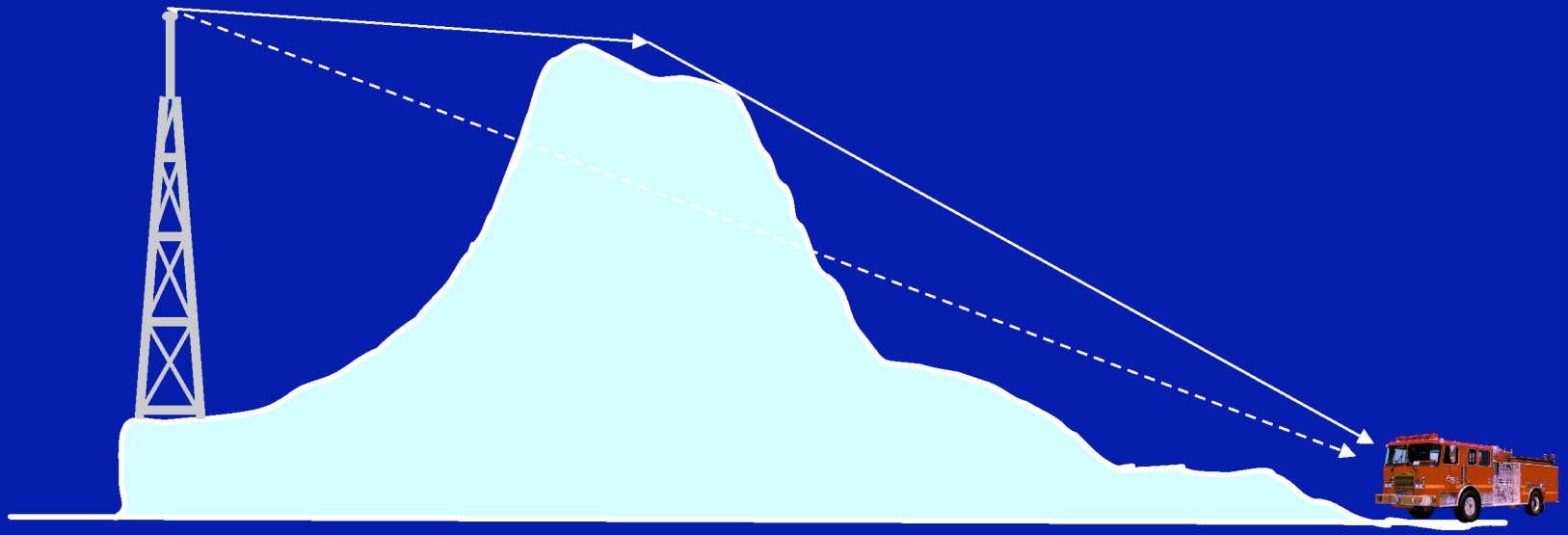
Other things that effect radio operations include: scatter effect, propagation, underground, metal structures, concrete structures, etc. Now let's add in interference from electrical, mechanical, solar, barometric, humidity, etc. and we begin to get an understanding of radio operational difficulties we encounter.

Line-of-Sight



Both UHF and VHF radio's are considered "Line of Sight" transmission. If you are in a valley, among high rises, etc. You may find your transmission and reception compromised. Relocation may solve this difficulty.

Out-of-Sight

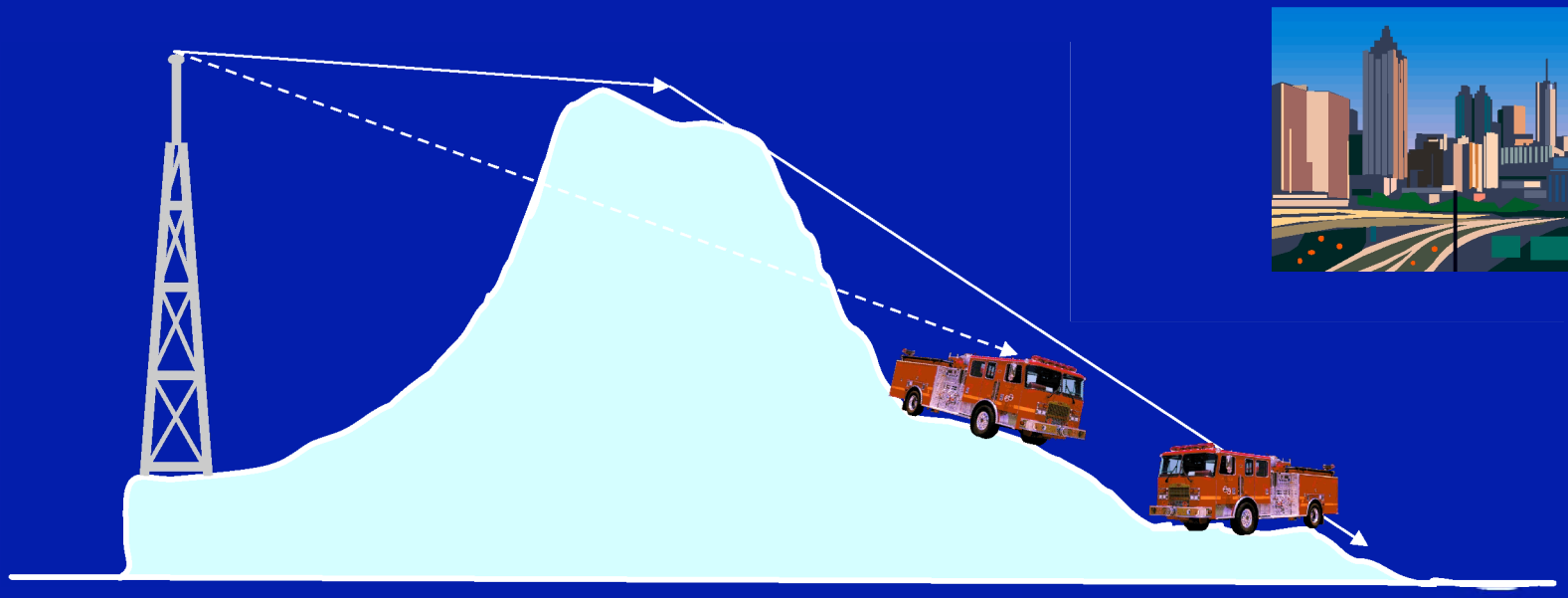


Diffraction loss

A signal loss occurs even though we were able to complete our transmission. This reduction can vary in effect and be compounded by other factors.

(eg: trees, powerlines, buildings, etc.)

Signal Loss



Topography Signal loss

A nearby unit can communicate but you can't.

Move locations or ask for another unit to relay.

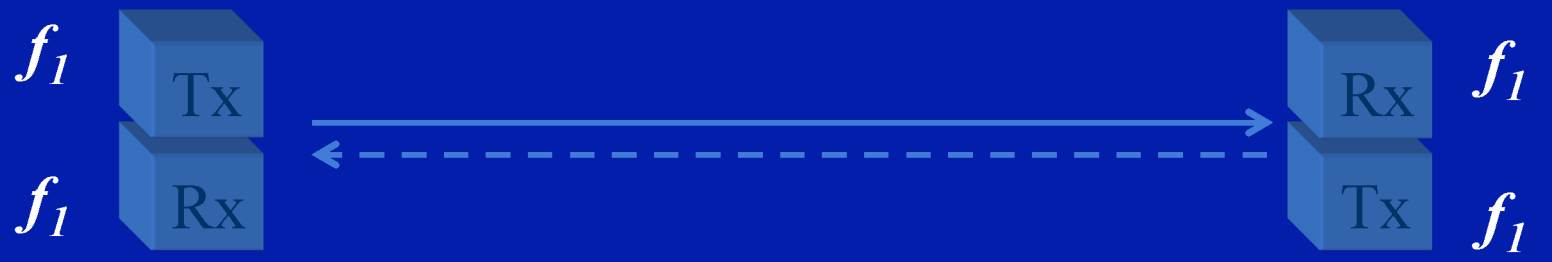
You may consider placing a unit in a good line of sight location for the sole purpose of relaying communications as necessary.

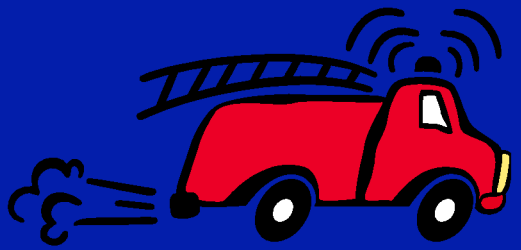
Watch Out's

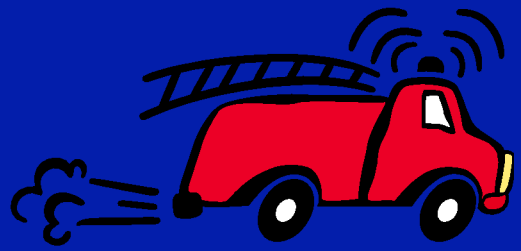
- Radio Interference – "Watch Out's"
  - High Power lines and transformers
  - Underground cables
  - Computers
  - Other radios

Move location!
Human Repeater?
Aircraft to relay?

Direct Mode (Simplex)

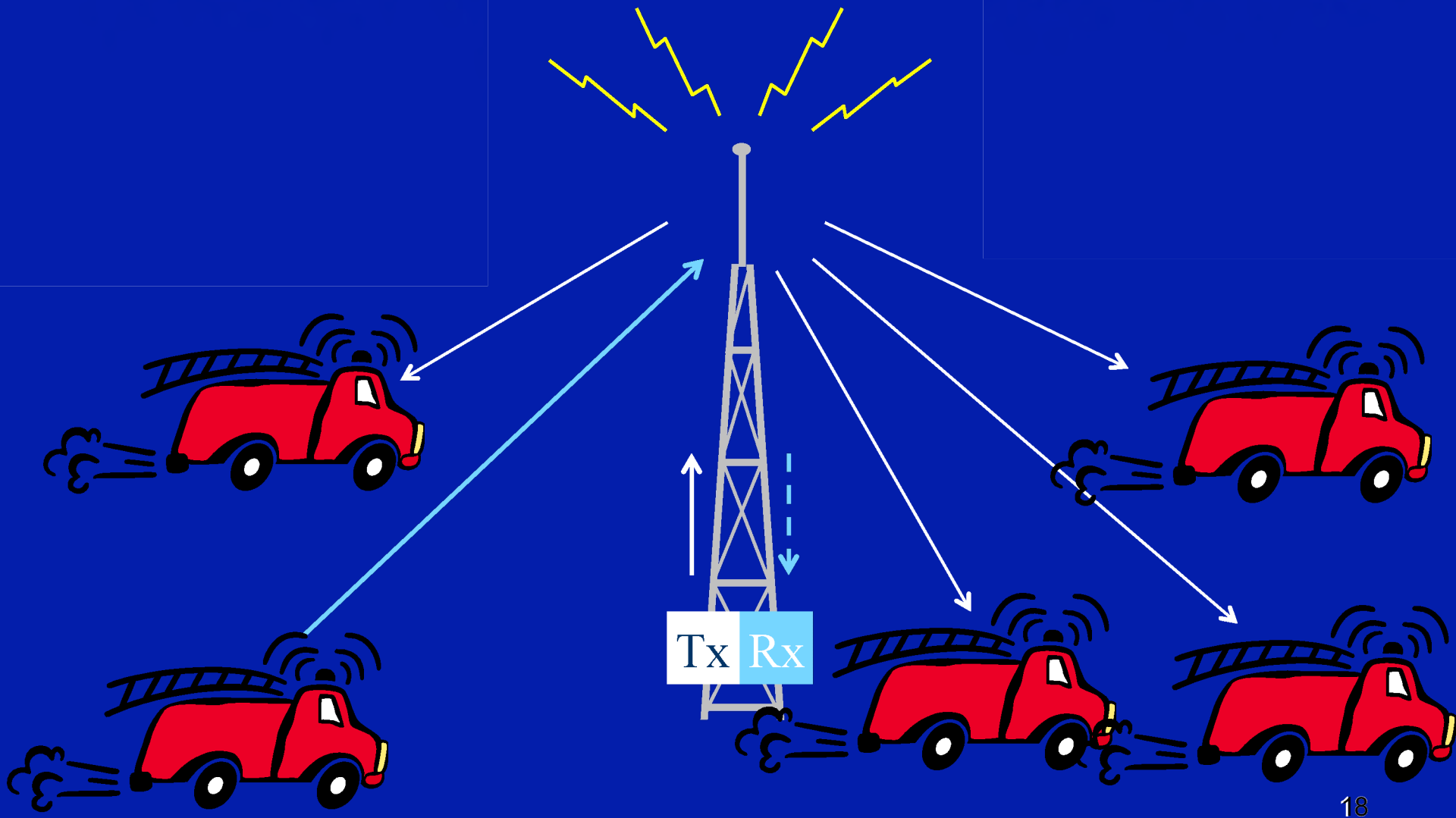




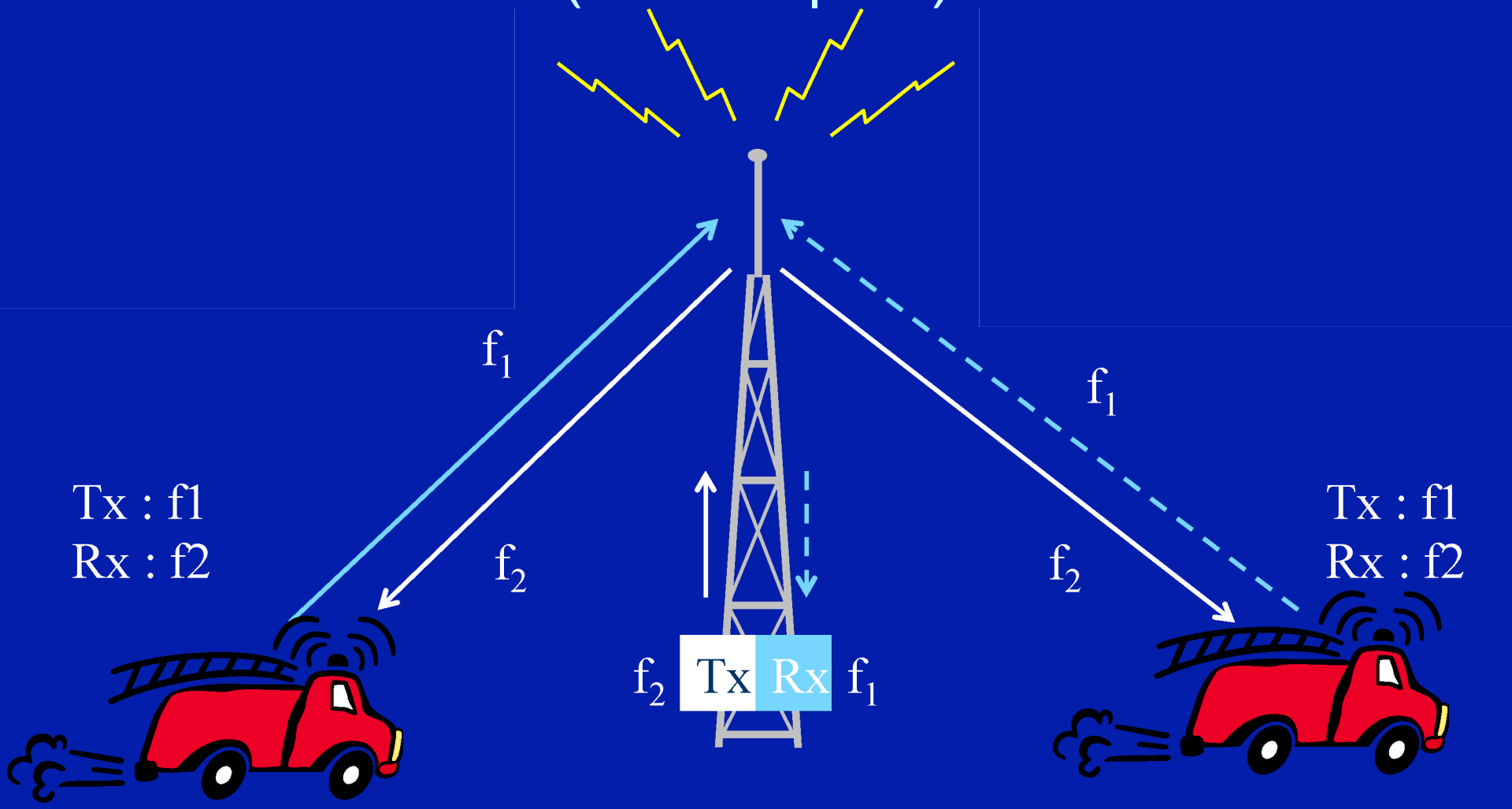


Tx and Rx operate at the same frequency.
Users must wait for a break to transmit, otherwise we step on each other and
no one gets their transmission through.

One-to-Many – Repeat (Duplex)



Mobile-to-Mobile
(Half Duplex)



CLEAR TEXT

- All personnel assigned to incidents should use “Clear Text” when talking on the radio
- Clear Text is communicating without using special codes
- Talk as you would talk normally
- NO 10 Codes
  - 10-4 Good Buddy!!!!

OTHER COMMUNICATION

- Other forms of communication may include using:
  - Telephones
  - Cellular Phones
  - Satellite Phones
  - P.A Systems
  - Runners

Bendix / King (BK)

- Pro's
  - Multi-channel / multi-group
  - Selective Channel Scan
  - Priority Feature
  - Field Programmable
  - Battery Operated
  - Light Weight 2 ½ lbs / Compact
  - Compatible with all F.D. agencies
  - Both UHF and VHF capabilities

Bendix / King (BK)

- Con's
  - Difficult to read display at times
  - Moisture Problems
  - Control knobs fall off on older models
  - Battery life discharges quickly in priority and scan mode

Top Control Panel

- On / Off
- Squelch
- Antenna
- 14 Channel's
  - Per Group
  - Positive stops
- Priority
- Scan
- Hi / Lo
- Low Battery
- Transmit

Priority Toggle Switch

- Rubber Coated
- Weatherproof
- Allows user to select a Priority channel when using scan mode.

Scan Switch

- Single channel select
  - Towards display
- Multi channel select
  - Away from display

Lo / Hi Toggle Switch

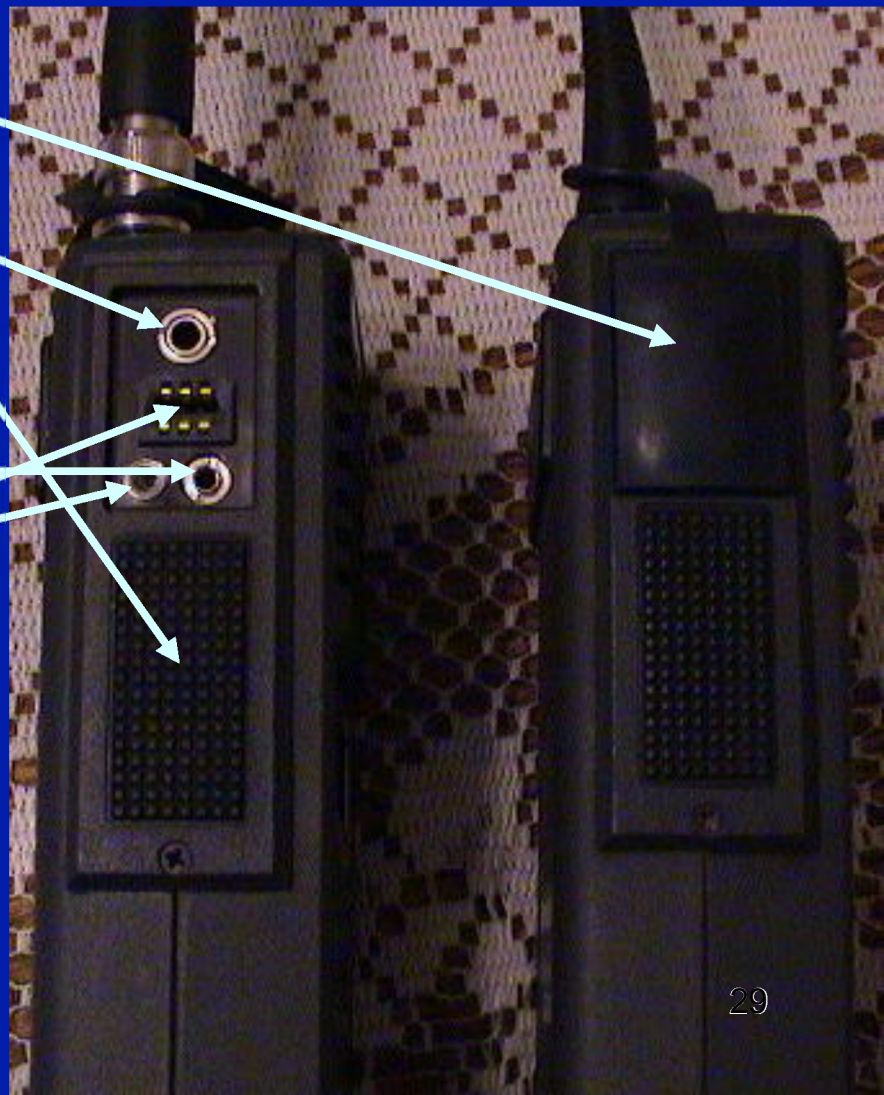
- Rubber Coated
- Weatherproof
- Controls Transmitter power level
  - Battery life decreased in Hi
  - Hi is useful in remote areas
  - Utilize Lo routinely

Front Control Panel

- Protective Cover
- Key Pad
- LED
  - LED becomes lit when…
    - Turned on
    - Transmitting
    - Channel selected
    - Toggles moved
    - When key pad pushed

Side Panel

- Protective Cover
- External Antenna
- Push to Talk (P.T.T.)
  - Rubber Coated
- Mic. Connection
- Ear Piece Outlet
- Prongs
  - Field programming is capable with the use of a cloning cable or a programming plug



Antenna's

- You can find all these in the camp section

Batteries

- Nicads / rechargeable
  - 3 to 4 hrs.
- Clam Shell
  - 9 to 10 AA
  - 6 to 10 hrs.
- Alkaline / Non-rechargeable
  - 4 to 6 hrs.