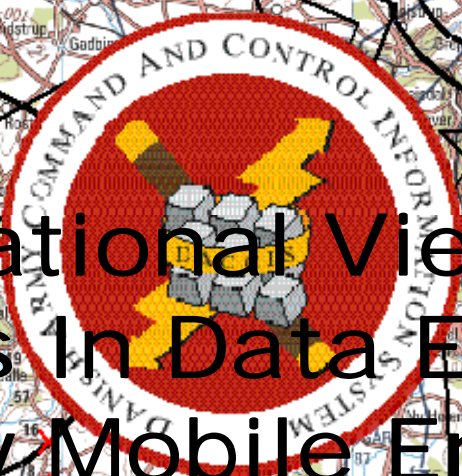


Danish Army Command and Control Information System

An Operational View of the Problems In Data Exchange in the Army Mobile Environment

Major Erling Rasmussen
Danish Army

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Report Documentation Page

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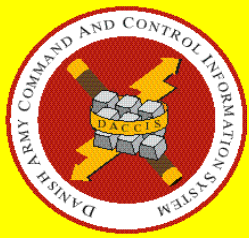
THE SPEAKER

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Information System
&
ACOS/CCIS-Section/Danish Division

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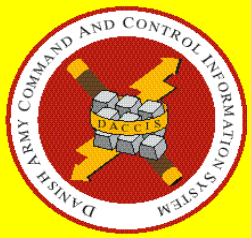


"Giving bad commanders more information does not make them good. They just make bad decisions faster, or get so overwhelmed that they can't make any decision"

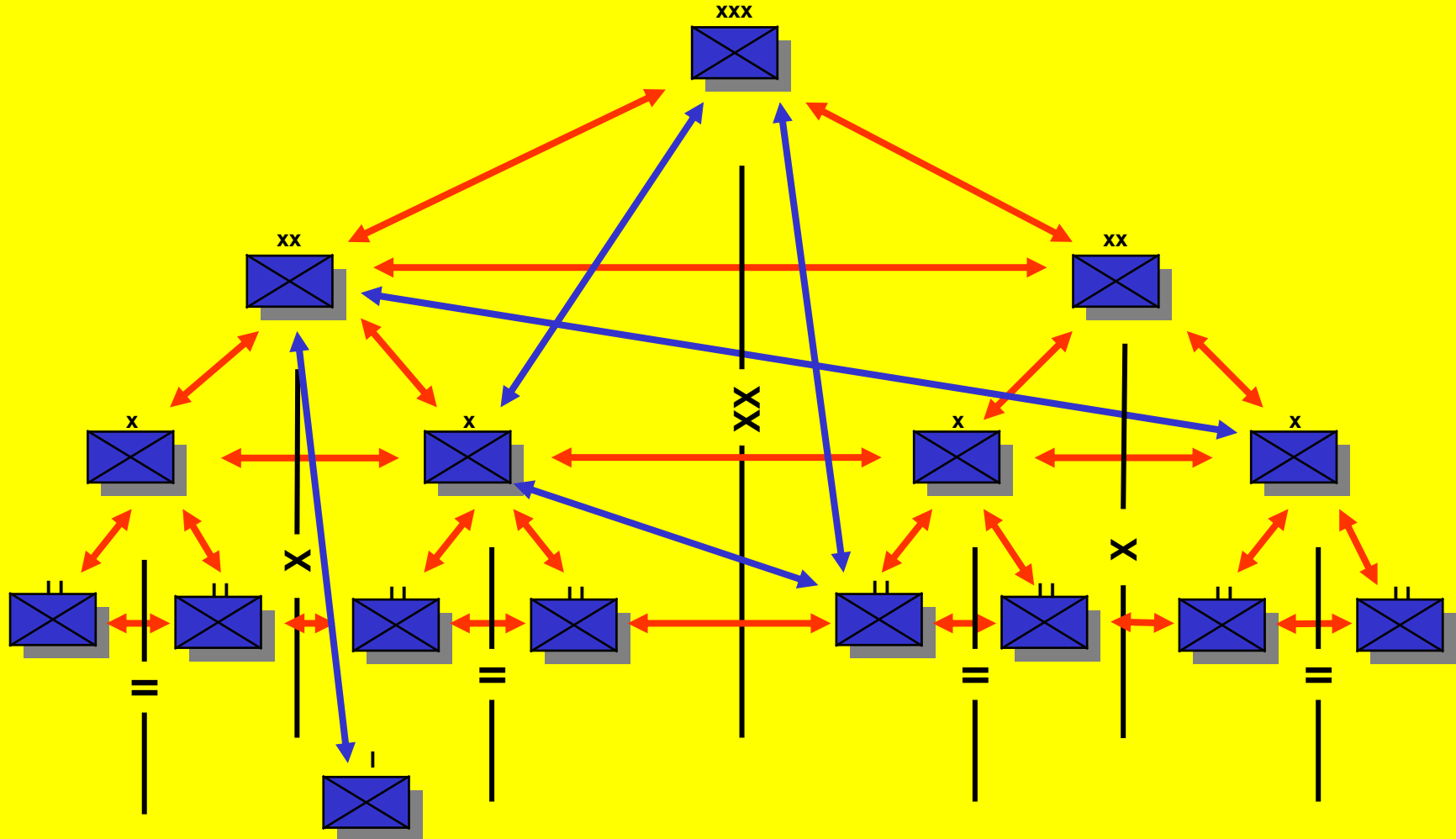


C2 PURPOSE

- **To reduce time consumption**
- **To improve the basis for decisions.**
- **To improve exchange of information.**
- **To improve handling of information.**
- **To modernise the presentation of information**
- **To improve and extend the use of computer assisted exercises (CAX).**



INFORMATION EXCHANGE



WHAT TO HANDLE?

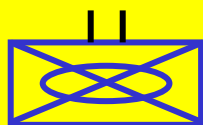
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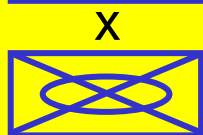
WHAT TO HANDLE? (INVESTIGATIONS)



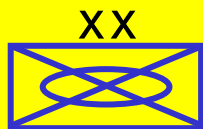
G2: (Good old Warsaw Pact scenario)



50 – 75 Informations/Hour



100 – 125 Informations/Hour



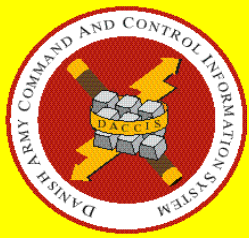
150 – 175 Informations/Hour

Division and sub units:

116.000 full filled pieces of A4 papers/24 Hour

Division (SE Investigation):

70.000 Updates per 24 Hours



WHAT TO HANDLE?

PLANS & ORDERS:

- 5 Operational Plans

Incl. Orders (STANAG 2014), Task Organisation, Request's

EXECUTION/CURRENT SITUATION:

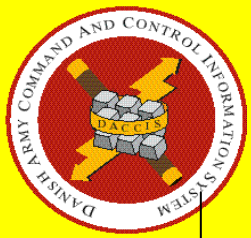
- Exchange Information between min. 20 units
- Continuous exchange of information on unit positions, activities, holdings, geometri (boundaries, phase-lines etc.)for four parties (own, enemy, unknown, neutral)
- Min. 200 exchanges per server per hour.
- Request's



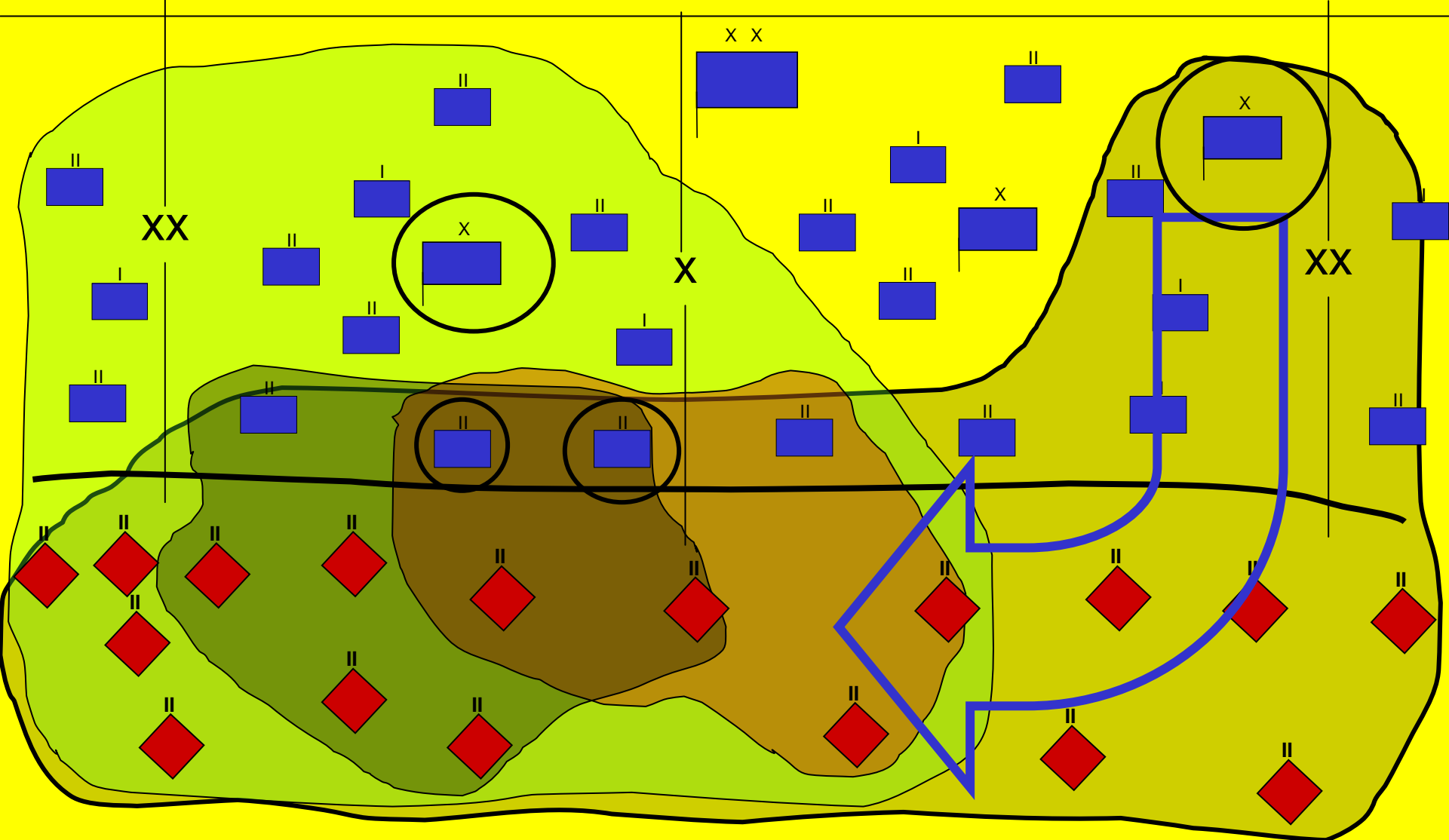
WHAT TO HANDLE? (Cont.)

BASIC INFORMATION:

- Exchange of information on organisation, incl. Materiel, holdings and personel.



AREA OF INTEREST (WARFIGHTING)





COMMON OPERATIONAL PICTURE

***WHO IS DECIDING WHICH INFORMATION
THE COMMON OPERATIONAL PICTURE
INCLUDES ?***

- ONLY THE COMMANDER'S INVOLVED!

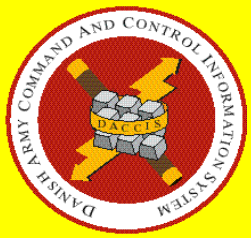


AREA OF INTEREST (PEACE SUPPORT OPERATIONS)

**CAN OTHER THAN THE LOCAL
COMMANDER'S DEFINE THE
AREA OF INTEREST OR
THE COMMON OPERATIONAL
PICTURE?**

PROBLEMS!

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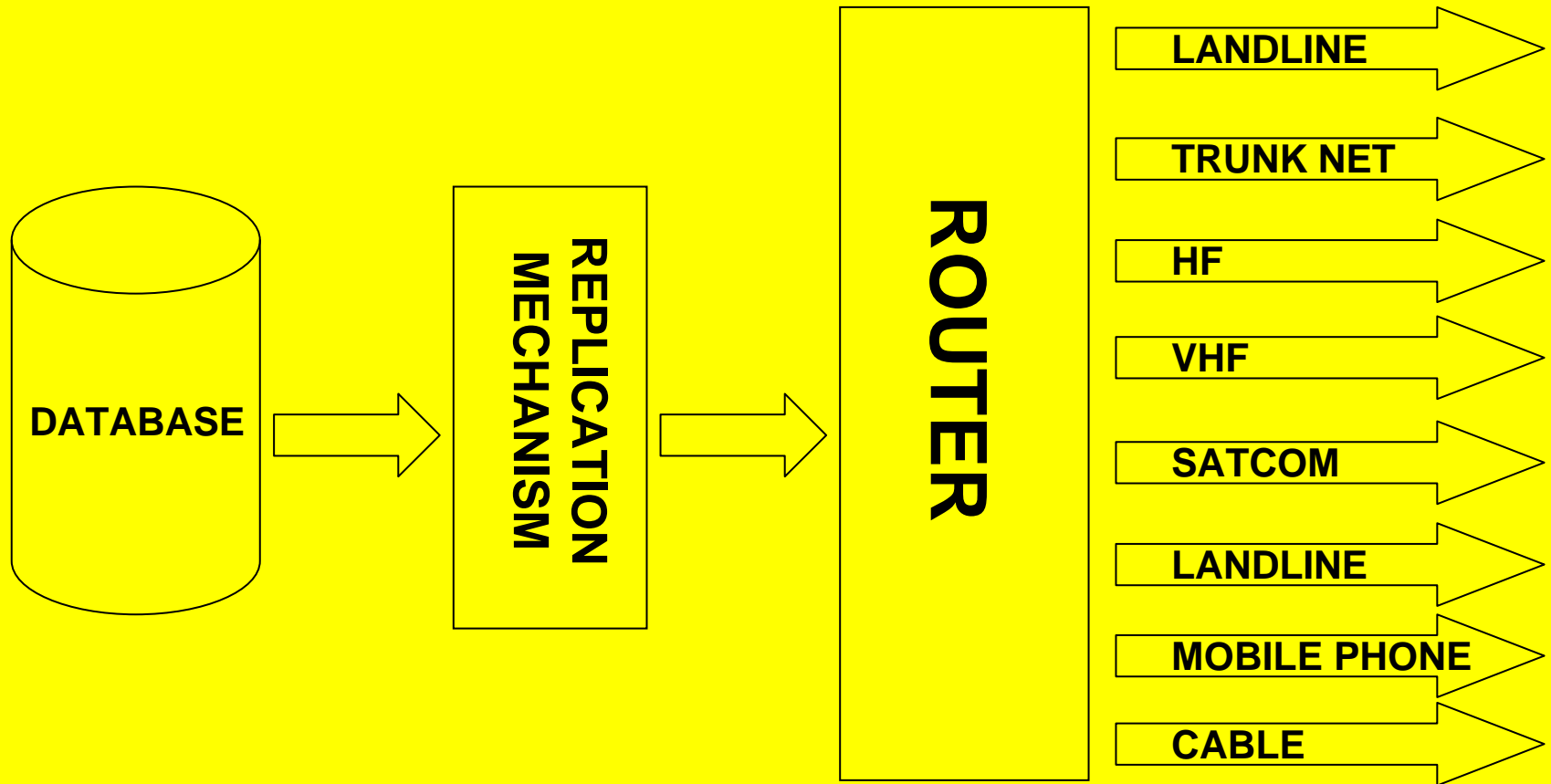


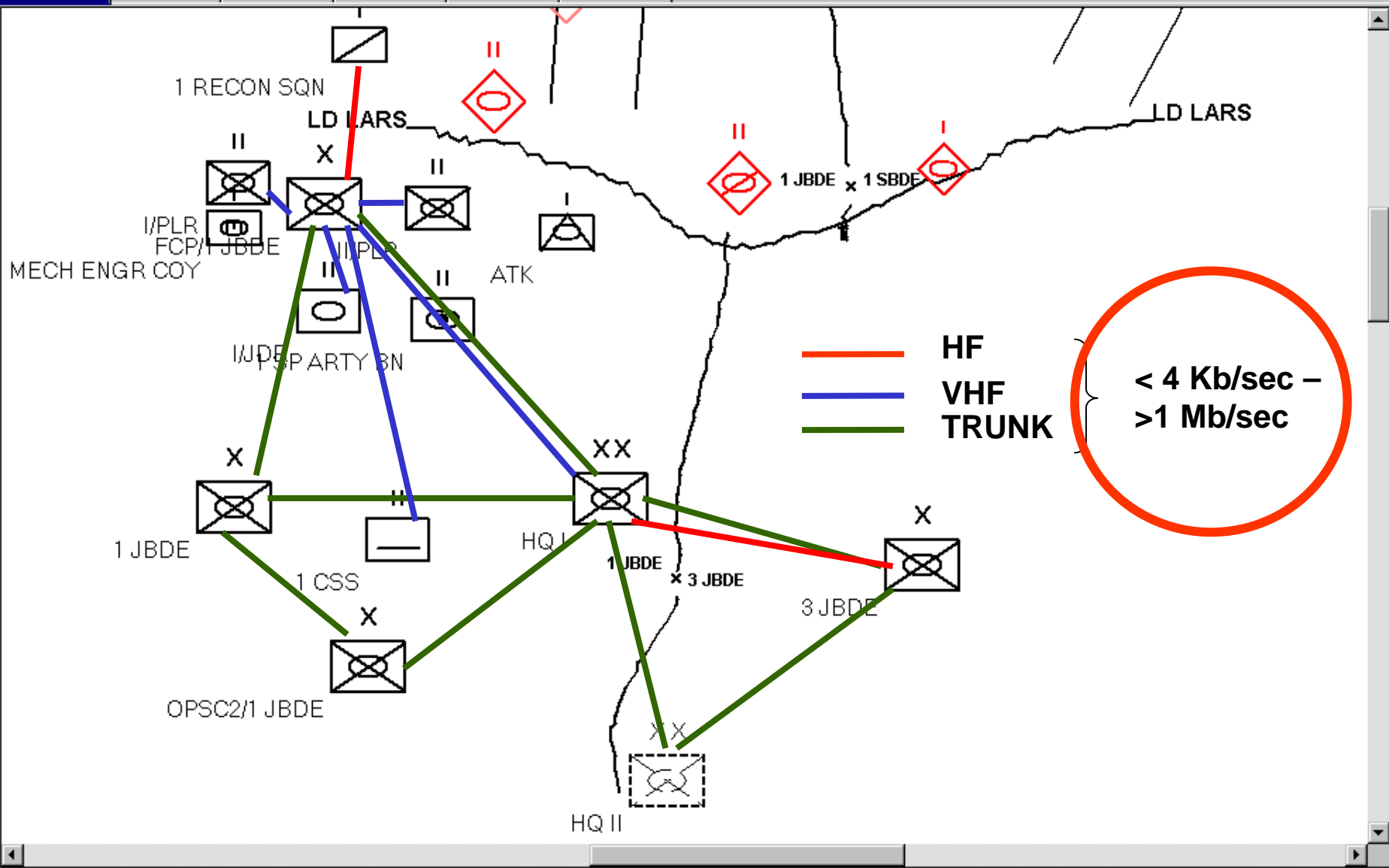
COMMUNICATIONS





COMMUNICATION







REPORTS

DID YOU KNOW THAT... The following messages have support for automatic processing, updating and generation:

Land:

JUNIT
OPSITREP
EOPSITREP
PERSREP
OWNSITREP
ENSITREP

Naval:

GOLD
XCTC
NAVSITREP
NAVSITSUM
MARINTREP
MARINTSUM
UNSTATREP
NAVACTREQ
NAVACTSUM
OPSTATREP

Joint:

ASSESSREP
LOGASSESSREP
CISSITREP
PSOSITREP
MEDASSESREP
MEDSITREP



MIP MTF ORGLOCAT

ORGLOCAT.irs - WordPad

File Edit View Insert Format Help

EXER/MIP LOT//
 MSGID/ORGLOCAT/-/-/-/-/-//
 SEG4/-//
 RPTD/202000000000010002/REP/YES/-/TRSTED/36580/43200/RDABST/-
 /202000000010001/20200010001/0//
 RPTDAT/202000000000010002/0/36580/43200/HR/20200010001/0//
 OBJIS/202000000010008/202000001001/OR/FR/202000000000010002
 /20200010001/0//
 ORGSTAT/202000000010008/202000001001/OPR/NKN/-/NORM/NO/ INACT
 /20200010001/0//
 SEG9/-//
 LOCAT/202000000040008/PT/20200010001/0//
 POINT/202000000040008/ABS/100M/100M/20200010001/0//
 ABSPOINT/202000000040008/LOC/31.116230/-97.904070/20200010001/0//
 RPTD/202000000000010003/REP/YES/-/TRSTED/36580/43200/RDABST/-
 /202000000010001/20200010001/0//
 RPTDAT/202000000000010003/0/36580/43200/HR/20200010001/0//
 ORGPOINT/202000000010008/202000000040008/202000001001/-/-/-
 /202000000000010003/20200010001/0//

900 b

For Help, press F1

NUM



DACCIS Database to Database Exchange

Daccis - <G3>

Orders G3 Overlay G3ord Map View Help

32U NG 3455 6283 WGS1984 UTM32N EKSEMPLER - Not started Scale: 1:146631

G3 G3 Sit G2 Sit G3 Arty G3 Engr G4

< 20 b

Start Microsoft PowerPoint - [PP... Daccis - <G3> Task Organisation for Plan... 11:49 PM



THE BATTLE OF BANDWIDTH

TO DAY:

CCIS

TO MORROW:

- **ARTILLERY**
- **AIR DEFENCE**
- **ENGINEER**
- **CIMIC**
- **LOGISTICKS**
- **COMMS**
- **NGO'S**
- **POLICE**
- **ETC.**



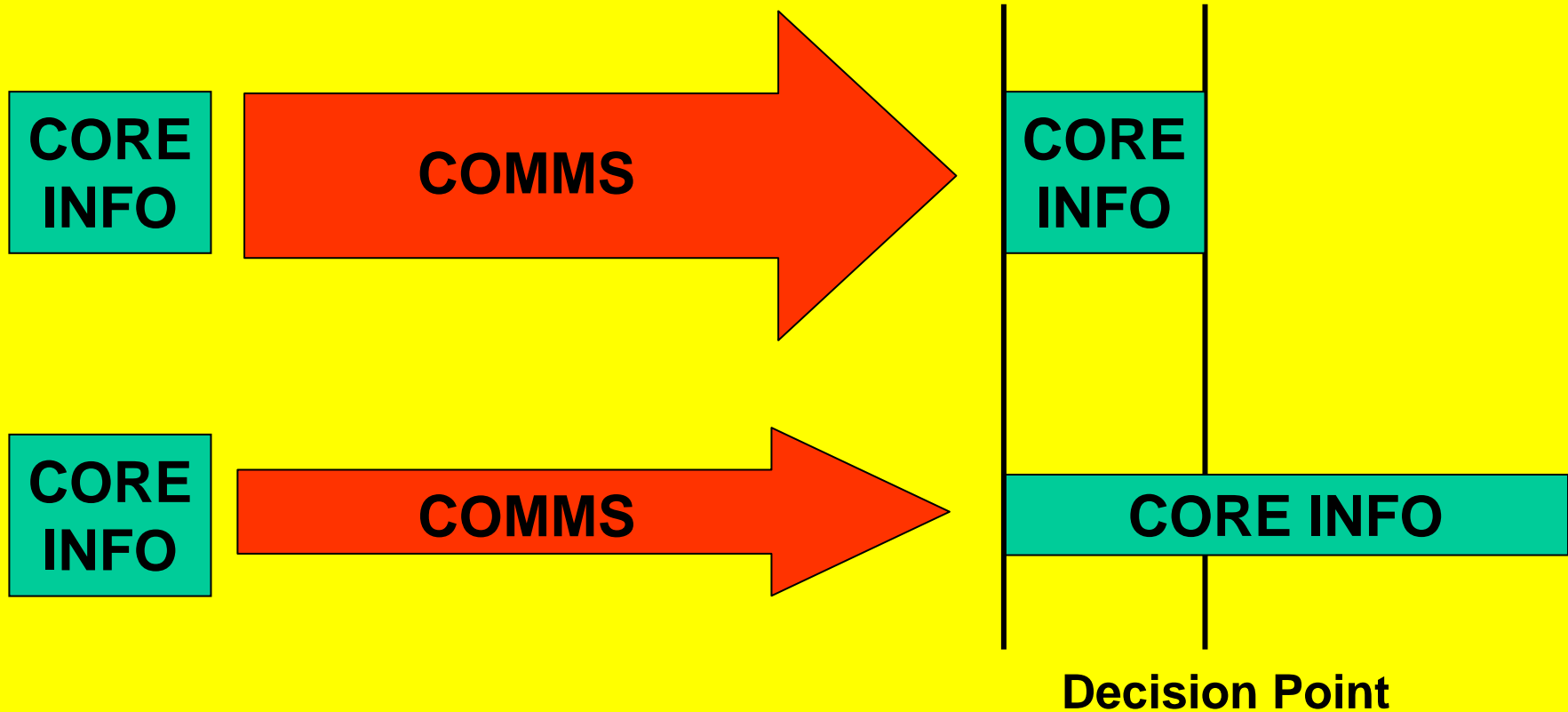
BANDWIDTH IS A PROBLEM!



THE PROBLEM

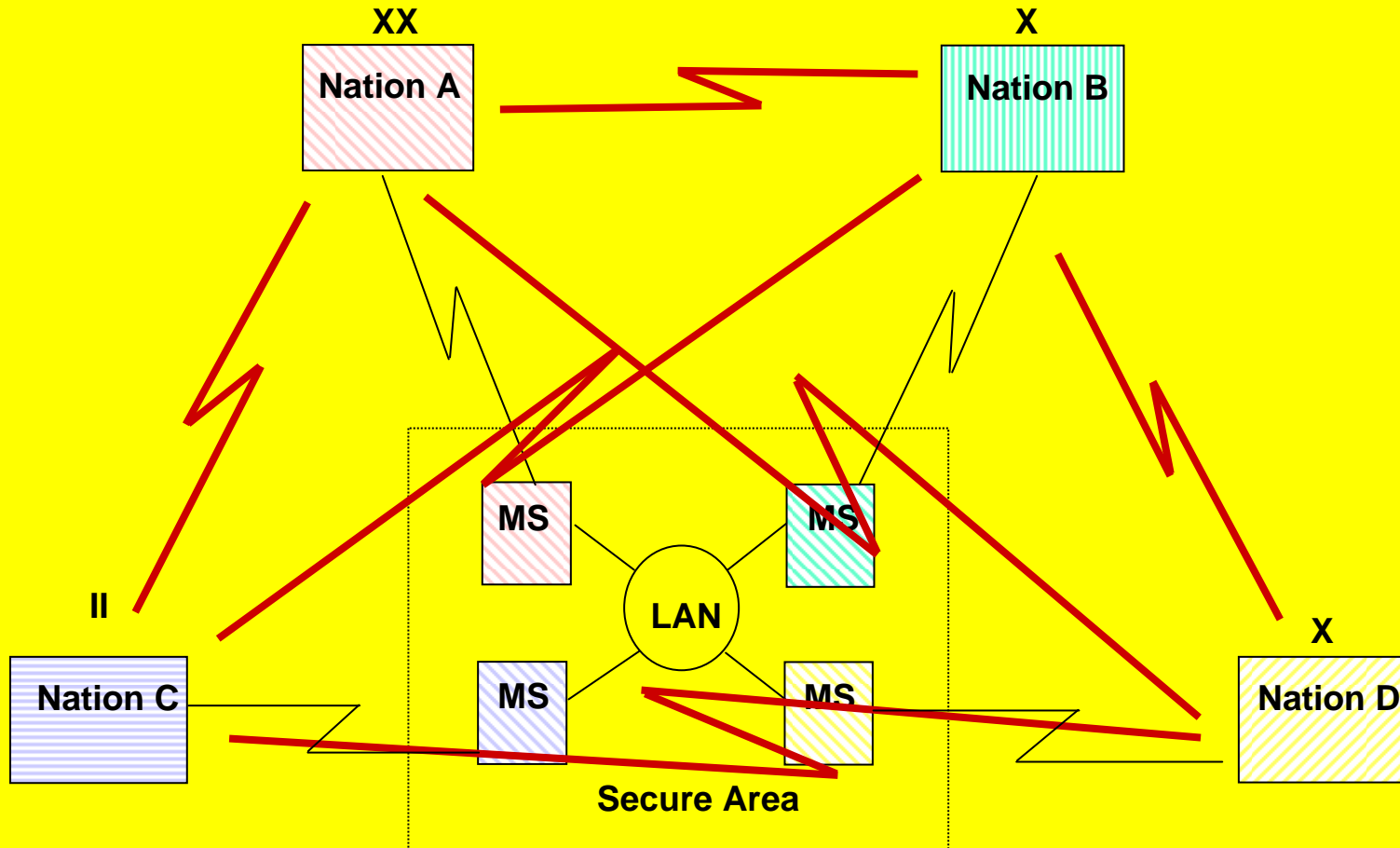
PROVIDER

RECEIVER

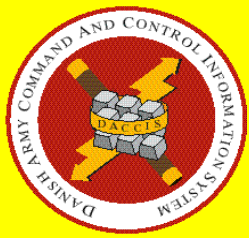




A SOLUTION A POSSIBLE **NEW** SOLUTION



**DIRECT DATABASE TO DATABASE
CONTROLLED UPDATES**



OPERATIONAL DOMAIN'S

- Planning
- Execution/Situation
- Reference data



FUNCTIONAL AREA'S (An example)

- 1: Manoeuvre**
- 2: Intelligence**
- 3: Fire Support**
- 4: Logistic**
- 5: Mobility/Counter mobility**
- 6: Survivability/Protection**
- 7: Air Defense**
- 8: Command and Control**
- 9: CIMIC**



THE CORE MILITARY INFORMATION *MUST BE DIVIDED*

PROVIDER

RECIEVER

1	2	3
4	5	6
7	8	9



1	2	3
4	5	6
7	8	9

1	2	3
4	5	6
7	8	9



2	3	8
4	6	7

1	2	3
4	5	6
7	8	9



2	4	7
---	---	---

**COMMANDER'S
DECISION**

1 = FUNCTIONAL AREA



**COMMANDER'S
DECISION**

THE CORE MILITARY INFORMATION MUST BE DIVIDED (2)

PROVIDER

RECIPIENT

1	2	3
4	5	6
7	8	9



1	2	3
4	5	6
7	8	9

1	2	3
4	5	6
7	8	9



1	2	3
4	5	6
7	8	9

1	2	3
4	5	6
7	8	9



1	2	3
4	5	6
7	8	9

1	2	3
4	5	6
7	8	9

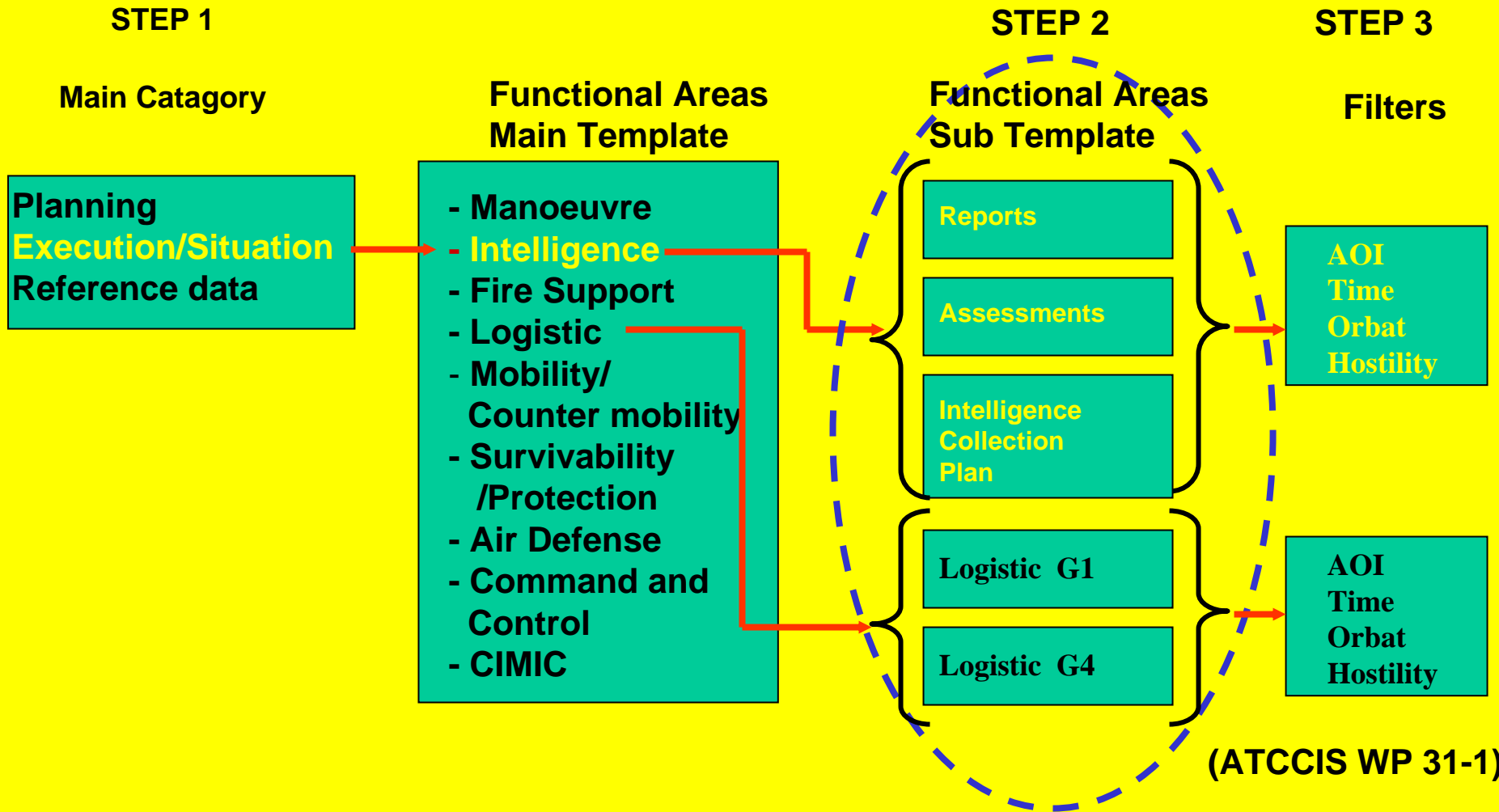


1	2	3
4	5	6
7	8	9



DYNAMIC CONTRACTING

(ATCCIS WP 18-2)





REQUEST/RESPONSE



Intelligence Collection Plan [-] [□] [X]

Entry(s) Settings Intelligence Report/Assessment Information Point

Current entries | Old entries

Serial Number	Intelligence Requirements	Information Requirements	Indicators	Requestor	RISTA system	Time/Place Form of Report	Remarks	Priority	ICP Overlay
3	Traffic	Investigate	Adopt	1 JBDE	14 ADM BN	161431Z AUG 2003	Construction	4	SIT
4	Bridge in town	Ask	Reject	DDIV	1 ZBDE	171431Z AUG 2002	No remarks	3	SIT
5	Traffic over bridge	Search	Adopt	1 JBDE	2 MP COY	181431Z AUG 2003	People	5	Plan - Great V
IR 6	Artillery in Sæby	Find	Reject	1 JBDE	3 SIG BN	191431Z AUG 2003	Population	3	Plan - Fat Go
7	Bridge in forest	Investigate	Adopt	DDIV	1 JBDE	301431Z AUG 2003	Construction	2	SIT
8									

Print [Ok] [Cancel] [Help]

REQUEST/RESPONSE (Cont.)



Intelligence Collection Plan

Entry(s) Settings Intelligence Report/Assessment Information Point

Current entries | Old entries

	Indicators	Requestor	RISTA system	Time/Place Form of Report	Remarks	Priority	ICP Overlay	Status	Result
IR	Adopt	DDIV	3 JBDE	141431Z AUG 2003	Possibly bad weather	1	SIT	Aborted	UAV shot down
IR	Reject	Corps	DDIV	151431Z AUG 2003	No remarks	1	SIT	Complete	Enemy spotted
	Adopt	1 JBDE	14 ADM BN	161431Z AUG 2003	Construction	4	SIT	In progress	5 pictures taken
	Reject	DDIV	1 ZBDE	171431Z AUG 2002	No remarks	3	SIT	Cancelled	Enemy surrendered
	Adopt	1 JBDE	2 MP COY	181431Z AUG 2003	People	5	Plan - Great Warrior	Not started	Lot of casualties
IR	Reject	1 JBDE	3 SIG BN	191431Z AUG 2003	Population	3	Plan - Fat Goose	Not known	Nothing to report
	Adopt	DDIV	1 JBDE	201431Z AUG 2003	Construction	2	SIT	Not started	

Print Ok Cancel Help

Color code:

Red – New ICP entries, which have not been “accepted” by the actor.

Green – The ICP entry is completed.

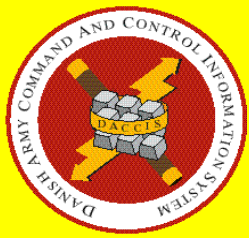
Blue – The specified time of completion for the ICP entry has passed.

Black – All other situations.



ADVANTAGES

- **SUPPORTS DOCTRINE**
- **SUPPORTS CHANGE IN DOCTRINE**
- **SUPPORTS COMMANDERS EXACT NEEDS**
- **SUPPORTS Adat-P3/MTF/USMTF**
- **SUPPORTS CHANGE OF MISSION**
- **SUPPORTS PRIORITISING OF DATA**
- **COUNTERACT INFORMATION OVERLOAD**
- **SUPPORTS CHANGING OF UNIT COMPOSITION**



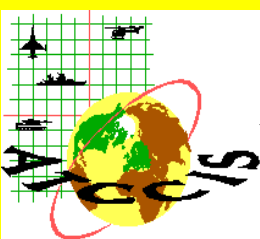
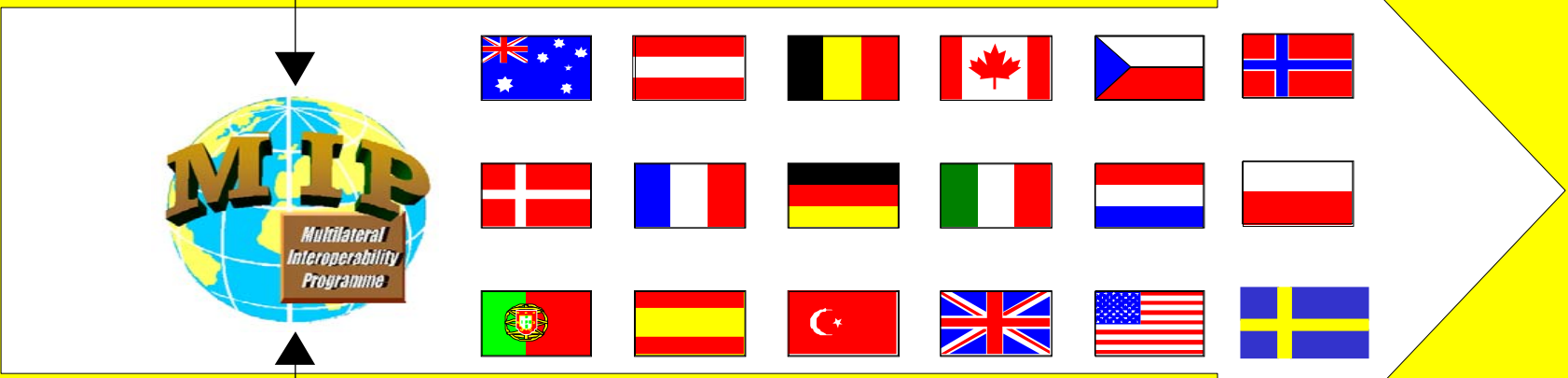
ADVANTAGES (2)

- **SUPPORTS SECURITY**
- **SUPPORTS CHANGE IN ORGANISATIONAL STRUCTURES**
- **SUPPORTS CHANGE OF OPERATION TYPE (CONFLICT SPECTRUM)**
- **SUPPORTS DATA FLOW CONTROL (SAVING BANDWIDTH)**
- **SUPPORTS OPERATIONS "ON THE MOVE"**
- **CHANGE OF HQ LOCATIONS**

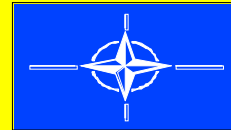


MULTILATERAL INTEROPERABILITY PROGRAM

19



Results to
NATO





5 Reasons Not to Worry About The Information Exchange Problem



1. There is too much data already – soldiers can't handle it.
2. Bandwidth is not a problem (It's just a modulation problem).
3. High speed radios will soon permeate the battle field.
4. Nothing will ever replace USMTF/MTF/AdatP-3.
5. Industry will fix this problem.

Sam Chamberlain, Ph.D.

US Army Research Laboratory

Computational & Information Sciences Directorate

Computer & Communication Sciences Division



?

The Legion



32U NG 0127 7793 WGS1984 UTM32N 1 BLACK HUSAR - Not started Scale: 1:187026

G3 G3 Sit G2 Sit G3 Arty G3 Engr G4

Danish Army Command and Control Information System



QUESTIONS - SO FAR?

