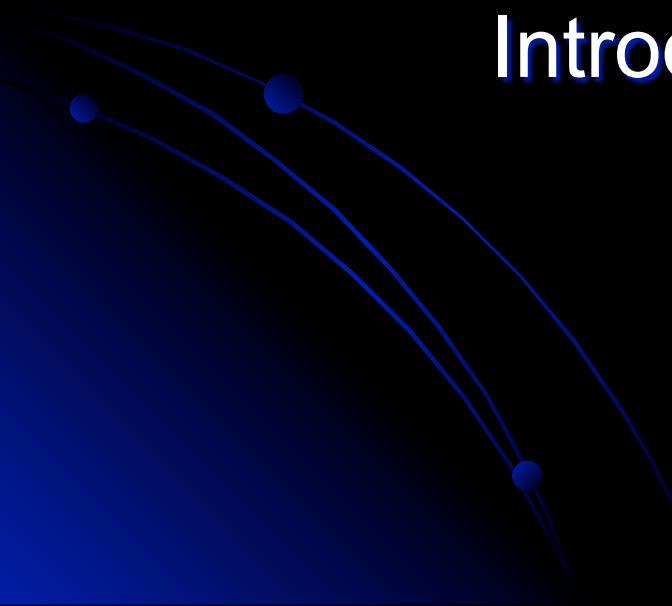# Defence Strategic Goods List

Introduction to the DSGL

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About the Author

- 35 years of experience as a military and strategic analyst;

- 23 years of experience in military strategy, technological strategy and defence policy;

- 600+ publications in defence / dual use domain, including peer reviewed C1/E1;

- Co-founder of independent military and strategic think tank – Air Power Australia;

- Part time computer science academic at Monash since 1999;

What is the DSGL?

- Primary document used by DECO to determine whether a product or research is controlled by the DTCA legislation;

- DSGL lists in detail all controlled items;

- Current version is 361 pages long, covering military items in Part 1 and no less than 9 categories of "dual use" goods in Part 2.

- Substantially derived from the US ITAR §121.1 "Munitions List" and US EAR "Commerce Control List" – most categories are verbatim copies of the US technology/goods lists;

Purpose of US ITAR and CCL Lists

- The US ITAR and CCL lists were designed for the purpose of regulating, primarily, the commercial and government export of military and dual use goods;

- Intent to deny unfriendly regimes the means of acquiring or maintaining US military equipment, reverse engineering and developing military equipment, and developing advanced technology with potential military applications;

- *ITAR and CCL were not designed to regulate "fundamental research" in academia or industry!*

DTCA versus ITAR / EAR

- While the item lists used in ITAR/EAR and DTCA are substantially the same, the legislative "footprint" or "scope" is fundamentally different;

- While the ITAR/EAR legislation controls disclosures, public discourse and academic work is permitted as "fundamental research", encompassing "basic" and "applied" research, providing ITAR/EAR material is not an input;

- *DTCA on the other hand follows the Cold War era Soviet regulatory model and controls almost all disclosures, other than "publication" in the "dual use" category;*

What is regulated – CCL/DSGL "Dual Use List"

- Category 0 — Nuclear Materials;
- Category 1 — Materials, Chemicals, Microorganisms and Toxins;
- Category 2 — Materials Processing;
- Category 3 — Electronics;
- Category 4 — Computers;
- Category 5 — Part 1 Telecommunications;
- Category 5 — Part 2 Information Security;
- Category 6 — Sensors and Lasers;
- Category 7 — Navigation and Avionics;
- Category 8 — Marine;
- Category 9 — Aerospace and Propulsion.

Structure – CCL/DSGL "Dual Use List"

- The CCL/DSGL categories typically comprise each five sections:

- **A Systems, Equipment and Components**

- **B Test, Inspection and Production Equipment**

- **C Materials**

- **D Software**

- **E Technology**

- While A, B, and C focus on the ability to produce the controlled goods, D and E relate to the ability to understand, design, develop, model, define or specify the goods.

Structure – CCL/DSGL "Dual Use List"

- The CCL/DSGL D and E sections are of critical importance, due to the presence of "catch all" clauses;

- "Catch all" clauses i.e.

1. *"Software" specially designed or modified for the "development", "production" or "use" of equipment, functions or features, specified in <Category N>; and*

2. *"Technology" to enable an item to achieve or exceed the controlled performance levels for functionality specified by <Category N>;*

Definition – CCL/DSGL "Dual Use List"

- **DTCA Definition**: *"**technology** relating to goods means: (a) information relating to the design, development, production, manufacture, assembly, operation, repair, testing, maintenance or modification of the goods (including information in the form of blueprints, drawings, photographs, plans, instructions, specifications, algorithms or documentation); or (b) software relating to the goods;*

- This definition, intended to control "intangible technology transfers" effectively covers anything of any substance relating to any item in the DSGL – whether the controlled item itself, or any software/technology in a "catch all" clause, thus effectively prohibiting any discourse other than "dual use" publications exemptions in DTCA2015;

"Catch alls" – CCL/DSGL "Dual Use List" (I)

- Public assertions by Defence/DECO that the controls in the DSGL are "narrow" and "specific" only hold where the "catch all" clauses in the DSGL are wilfully ignored;

- Researchers today rely heavily on simulations and modelling, and the software tools developed for research implicitly qualify as *"Software" specially designed or modified for the "development", "production" or "use" of …*

- Engineering and science researchers will find that commonly used modelling tools will qualify as such "software" and be controlled.

"Catch alls" – CCL/DSGL "Dual Use List" (II)

- The all encompassing definition of "technology" in the DTCA presents a "cascade" problem in the scope of DSGL coverage in Australia;

- Any work in any research area that might be applied in any way to "design" or "develop" any "goods" or "technology" in a controlled category itself becomes controlled;

- Therefore research in any "uncontrolled" category that could be applied to "design" or "develop" something in a "controlled" category becomes controlled;

CCL/ITAR vs DTCA Rationales

- The US CCL/ITAR lists were developed to prevent commercial and government organisations from exporting technology and goods, but due to ITAR/CCL "fundamental research" exemptions, cannot cascade into research areas outside the specific category;

- Australia's DTCA lacks these exemptions, and adds Soviet-like *"intangible technology transfer"* controls, permitting regulatory scope to cascade in an arbitrary fashion, as the law explicitly demands this;

- *This problem is not widely understood!*

Testing Research vs DSGL

- Given the structure of the DSGL and constraints in the DTCA legislation, research must be carefully tested to determine whether it falls under the scope or "footprint" of the Act;

1. Is the research directly in one of the 9 Part 2 "Categories", or the Part 1 "munitions list"?

2. Do the modelling and simulation tools employed fall under a "D" "catch all" clause?

3. Does the research itself or part thereof fall under an "E" "catch all" clause?

- *Being outside (1) is not being outside (2) and (3)!*

Conclusions

- The regulatory scope of DTCA is much greater than the scope of US ITAR/CCL controls;

- US ITAR/CCL lists constructed around the assumption of "fundamental research" exemptions;

- DTCA exempts only "basic research" and "dual use" "publishing";

- The "intangible transfer" controls in DTCA result in cascading scope of the regulation via "D" and "E" clauses in each of the 9 "dual use" categories, with cascading losses in costs, time and competitiveness;

- Compliance with DTCA will require extensive auditing of research to ensure that "D" and "E" "catch all" clauses are not breached;

BACKUP SLIDES

ITAR Exemptions (I)

- ## §120.10   Technical data.

  (b) The definition in paragraph (a) of this section does not include information concerning general scientific, mathematical, or engineering principles commonly taught in schools, colleges, and universities, or information in the public domain as defined in §120.11 of this subchapter or telemetry data as defined in note 3 to Category XV(f) of part 121 of this subchapter. It also does not include basic marketing information on function or purpose or general system descriptions of defense articles.

ITAR Exemptions (II)

- ## §120.11   Public domain.

(8) Through fundamental research in science and engineering at accredited institutions of higher learning in the U.S. where the resulting information is ordinarily published and shared broadly in the scientific community. Fundamental research is defined to mean basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community, as distinguished from research the results of which are restricted for proprietary reasons or specific U.S. Government access and dissemination controls. University research will not be considered fundamental research if:

(i) The University or its researchers accept other restrictions on publication of scientific and technical information resulting from the project or activity, or

(ii) The research is funded by the U.S. Government and specific access and dissemination controls protecting information resulting from the research are applicable.

EAR Exemptions (I)

- # § 734.8 INFORMATION RESULTING FROM FUNDAMENTAL RESEARCH

(a) Fundamental research

Paragraphs (b) through (d) of this section and §734.11 of this part provide specific rules that will be used to determine whether research in particular institutional contexts qualifies as "fundamental research". The intent behind these rules is to identify as "fundamental research" basic and applied research in science and engineering, where the resulting information is ordinarily published and shared broadly within the scientific community. Such research can be distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary reasons or specific national security reasons as defined in §734.11(b) of this part.

EAR Exemptions (II)

- ## § 734.8 INFORMATION RESULTING FROM FUNDAMENTAL RESEARCH

(b) University based research

(1) Research conducted by scientists, engineers, or students at a university normally will be considered fundamental research, as described in paragraphs (b)(2) through (6) of this section. ("University" means any accredited institution of higher education located in the United States.)

(2) Prepublication review by a sponsor of university research solely to insure that the publication would not inadvertently divulge proprietary information that the sponsor has furnished to the researchers does not change the status of the research as fundamental research. However, release of information from a corporate sponsor to university researchers where the research results are subject to prepublication review, is subject to the EAR.