Technology Transition
The End Game of R&D

Colonel James A. Ball, USAF-Ret.
Technology Transition Manager
CTTSO/TSWG

Technology Transition Starts with the Proposal

Promises, Promises

Expectations

Results

Technology Transition

- Objective: Affordable Operationally Suitable Technology in the Hands of our users.
- Planning is an integral part of R&D process
  - Starts with the proposal
  - Continues throughout development
  - Requires Periodic Deliverables
- Prepares US for the unexpected
- We provide assistance with issues.
- Teamwork makes US all successful.

Tech Transition
Today's Presentation

- Customers – Ours and Yours
- Transition Planning – What's it All About?
- Things you will want to know ….
- Issues and Answers
- Tools to help you plan.
- Questions

Our/Your Customers

- **Military Services**
- **Federal Agencies**
- **State and Local**
  - Emergency Responders
  - Public Safety

Our/Your Customers

- **Business and Industry**
  - Transportation
  - Energy
  - Communications
  - Construction
  - Infrastructure

Transition Planning

- **Is a Disciplined Teamwork Process**
- **Starts with Proposal Review**
- **Parallels Development Process**
- **Leverages all Markets and Applications**
- **Encourages User Evaluation and Input**
- **Fosters Affordability and Supportability**
- **Facilitates Availability to All Appropriate Users**
- **Protects Government Investment**
- **Enables a Win-Win-Win**

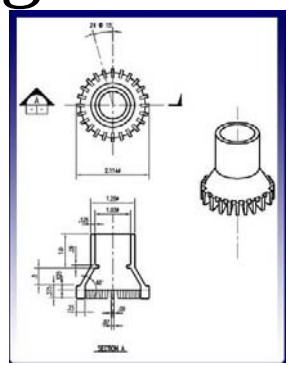
Not Planning

Things You will Want to Know

- Who is my Government Advocate?
- What are my IP Rights? - Who owns what?
- Will the government take over my work?
- What goes into a Test Plan?
- What regulations and standards apply?
- Do I have a liability problem?
- Do I produce it or license it?
- Can I continue to use the prototype?
- What about Security?
- Can I export the product?

Transition Planning

- Requirements
- Applications
- Intellectual Property Ownership vs Rights
  - Hardware (Design) & Process Patents
  - Data Rights
  - Software Rights – (They're different).
  - Rights vs Deliverables
  - Licensing Fees and Royalties
- Fear of Government Takeover!



Transition Planning

FAR/DFARS Govt. Rights vs. Developer Assertions

Funding	Government	Mixed	Private
Ownership	Developer	Developer	Developer
Hardware Patent	Non-Exclusive License	Non-Exclusive License	Non-Exclusive License
Data Rights	Unlimited	Govt Purpose	Limited
Software Rights	Unlimited	Govt Purpose	Restricted

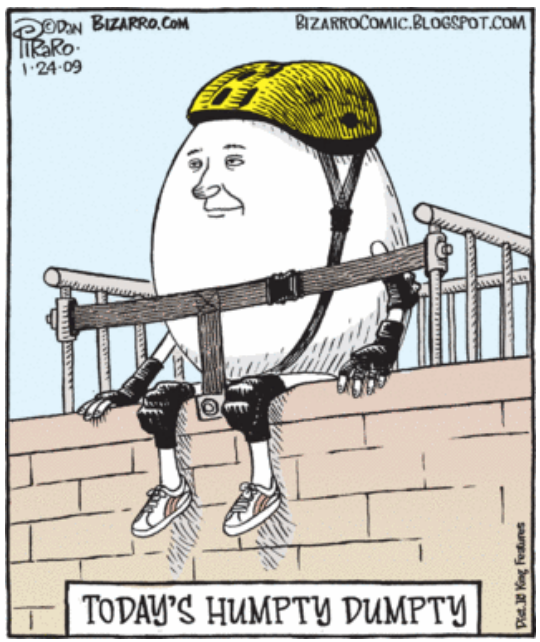
You invent it – you own it. We get to use it

Govt Rights vs. Reality

- We want you to be a success!
- If you develop it and want to produce it, we will encourage you in every way we can.
- If you can't produce it - we will help you.
- Government Intervention – A last resort.

Transition Planning

- **Regulatory Issues Analysis**
  - **FCC** **FDA** **FAR/DFARS**
  - **EPA** **NRC** **DOE**
  - **DOT** **OSHA** **ATF**

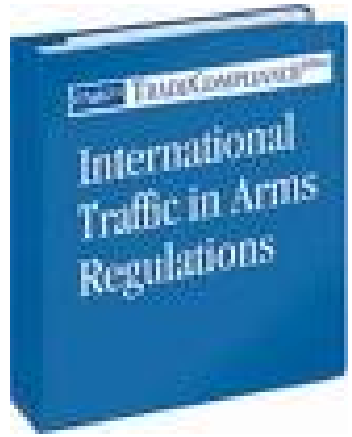


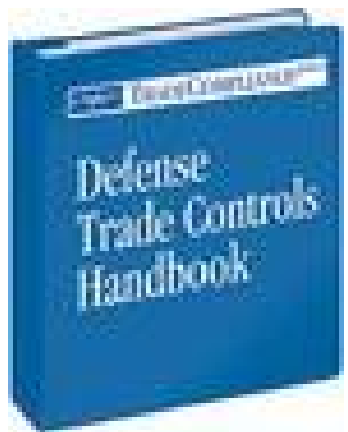
Transition Planning

- **Standards Identification**
- **Liability Risk Analysis**
- **Security Issues**
- **Publications**

Transition Planning

- **Export Control**
  - **Commodity Jurisdiction**
  - **Commerce – State – DOD**
  - **Export License**
  - **Universities - Foreign Students**
  - **Green Card Employees**
  - **Deployment of prototypes overseas**
  - **Foreign Testing**
  - **Importing for test**





MCTL
Militarily Critical Technologies List

Transition Planning

- **Market Analysis - Federal Sector**
  - **Agency Proponent(s)**
  - **Do you have a User Task Manager?**
  - **If you build it, WILL THEY COME?**
  - **Are they BUDGETING for it?**
- **Market Analysis - Private Sector**
  - **Your job - we may be able to help.**
  - **Larger market = lower costs and lower prices.**
  - **Everyone Benefits**

Transition Planning

- **Transition Strategy**
  - **Venture by Developer**
  - **Partnership**
  - **License to Producer**
- **Transition Resourcing**
  - **Federal Acquisition**
  - **Sponsored LRIP**
  - **Investment Capital**

Test & Evaluation

Development Testing

Operational Testing

Realism

It Must Work!

Transition Planning

- **Supportability & Sustainability**
  - **Designed in**
  - **Operations Manual**
  - **Training**
  - **Sustainment**
  - **Logistics**
  - **Service**
  - **Warranties**

Transition Planning

- **Outreach to Federal Users**
- **State and Local Government Users**
  - **Web Notices**
  - **DHS Responder Knowledge Base**
  - **DOD 1401 Program**
- **International Partners**
- **Use of Prototypes for further development**

Assistance

- Transition Plan - LIVING DOCUMENT
- Test Plan – We have Guidelines
- Fact Sheets – Export Control, Liability…
- Licensing Recommendations
- Federal Lab assistance via CRADA
- Outreach via FEDBIZOPS and Web

On Line References

www.cttso.gov

- **Transition Plan Guidelines**
- **Radio Frequency Spectrum and Emissions Management**
- **The DOD Intellectual Property Guide**
- **Technology Readiness Levels – definitions**
- **Safety Act and Application Kit**
- **Test and Evaluation Planning Guide**
- **Off Line References via e-mail**
  - **Introduction to Tech Transition**
  - **10 Steps to Reducing Liability during R&D**
  - **Export Control Guidance**
  - **LRIP Cost Analysis Model**

Avoid Surprises

Teamwork is the Key

- **Close Coordination and a Win-Win Approach**
  - **Project Manager**
  - **Contracts Officer**
  - **IP Counsel**
  - **Developer /User**
  - **Transition Manager**
- **Transition Plan**
- **Communication**

Plan Ahead!

Don’t Let Your Technology Become Homeless

Questions?

CTTSO
Technology Transition Program

Jim Ball

Technology Transition Manager

Combating Terrorism Technology Support Office

TechTrans@TSWG.gov