Acquisition Strategy

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- History - last conference Dec 1997
- Current Status
- Evolution to Product Line approach
- High-level Acquisition Strategy
- Downselection
- Contracting options/approaches
- PDRR Output
- RFP Expectations
- Program Management risks

History

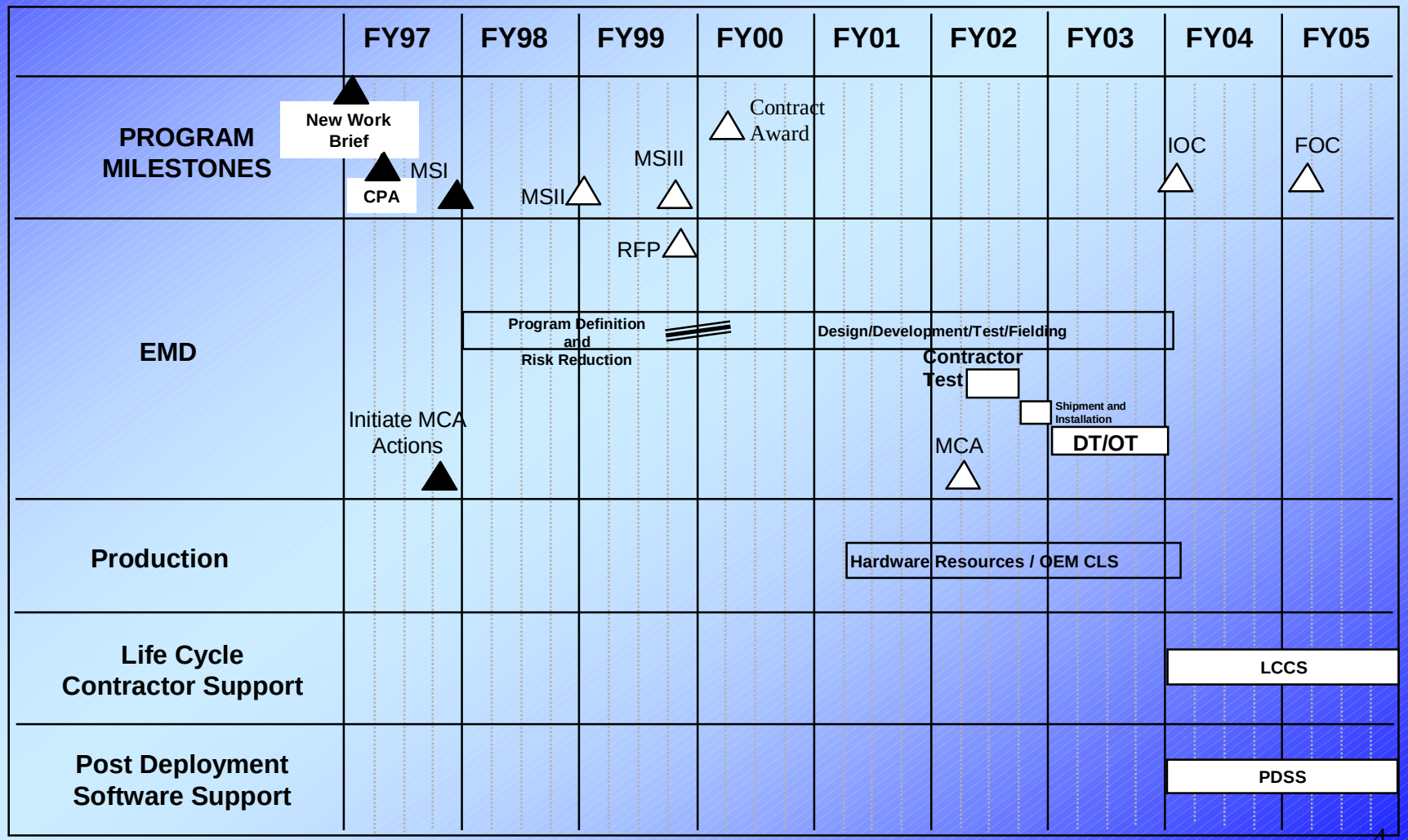
Last Industry Day We Said:

- **Description**: The NTC-OIS will be a fixed site, technically adequate, automated data collection and analysis system that will control the exercise and provide training performance feedback.
- **Overall Schedule**: The NTC-OIS has an IOC of 3Q FY05 +/- one year based on user requirements**.**
  - Integration Schedule: **The NTC-OIS will begin integration in FY03.**

History
We Also Said:

- **Phase I: Concept Formulation FY98 - FY99:**
  - Functional Architecture Development
- **Phase II: Engineering and Manufacturing Development/Production:**
  - Five Year Acquisition.
  - Development of software, procurement of hardware to support testing.
  - Separate Procurement Contract for remaining hardware required In-Plant Test.
  - EMD will terminate and production will begin with MS III Decision.
  - Preplanned Product Improvements (P3I) will be integrated prior to installation.

History
Previous Program Structure



History
Previous Funding Picture

RDTE

	FY 98	FY 99	FY 00	FY 01	FY 0 2	FY 0 3	FY 0 4	FY 0 5
F	2.071	3.721	5.759	5.588	3.711	0	0.696	1.464
U			6.525	22.811	12.788	14.75	8.086	

DECREASE OVERALLPROJECT COST!!!

- **FUNDING WILL BE DRIVEN BY CAIV**
- **MATERIEL SOLUTION MUST SHOW COST DECREASE**
- **OMA COSTS MUST BE LOWER THAN CURRENT ANNUAL PROJECTION**
- **USE EARNED VALUE MANAGEMENT (EVM) APPROACH**

HOW?

EFFECTIVELY TEAMING WITH INDUSTRY

OPA

	FY 98	FY 99	FY 00	FY 0 1	FY 0 2	FY 0 3	F Y 0 4	F Y 0 5
F	0	0	0	0	19.514	26.771	0.677	0.145
U	0	0	0	0	10.357	61.978		

Current Status

- Conducting Program Definition and Risk Reduction (PDRR) activities:
  - ARL:UT BAA contract - Period of performance through Dec 2000.
  - STRICOM LTI Acquisition Team supporting Acquisition Strategy development - initial draft presented here today.
- Evolved strategy includes all future Instrumentation Systems (ISs) within a common product line.
  - CTCs, Homestation Instrumented Training Systems (HITS), and Military Operations in Urban Terrain (MOUT)
- Funding shortfalls have forced program delays and restructure.
  - Severe constraints in FY00 and FY01.
  - Opportunity to fix budget in FY02-07 POM.

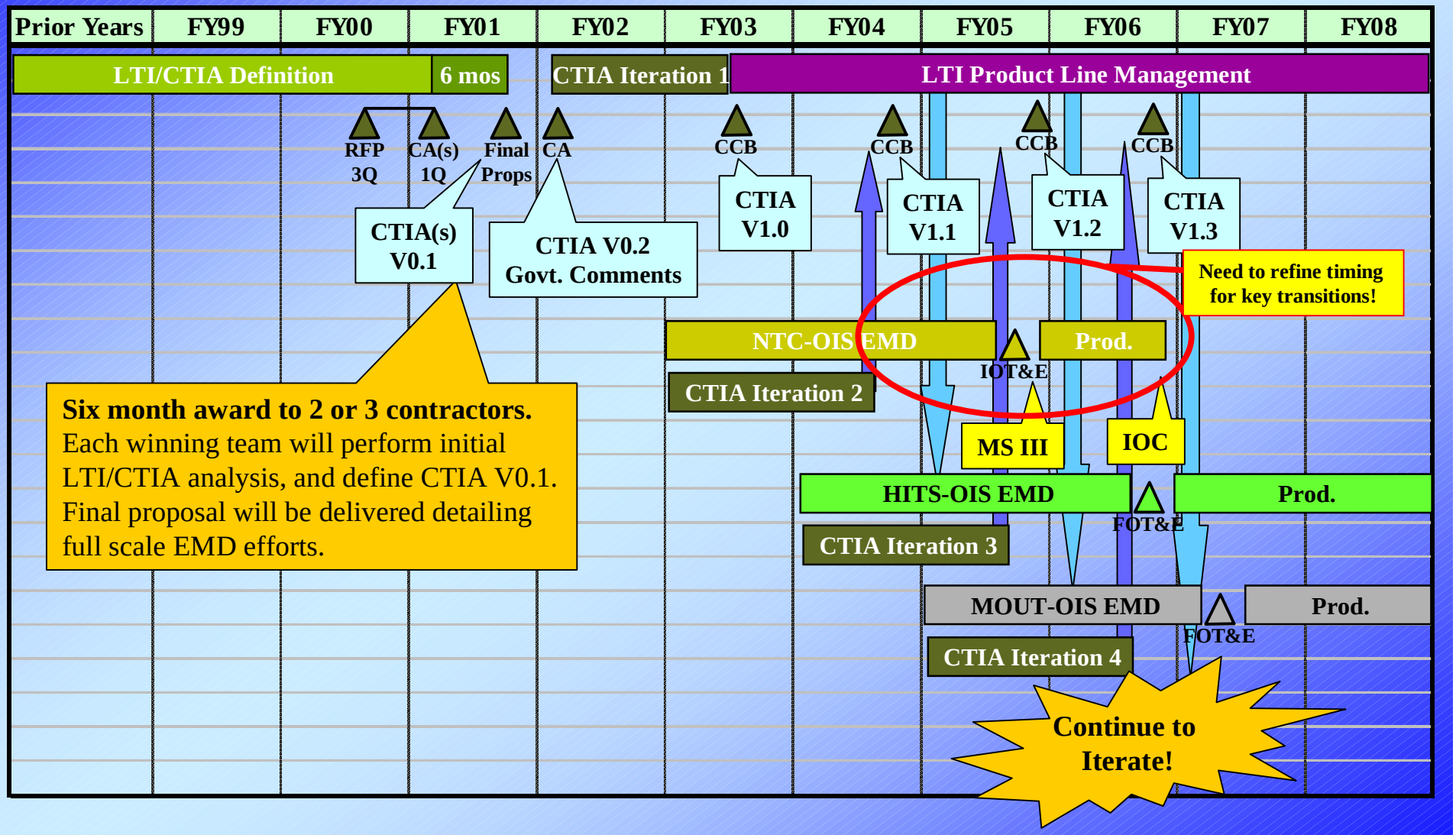
Evolution to Product Line Approach

- STRICOM chartered to technically integrate requirements.
- LETS/LTI Drivers:
  - Similar ORDS for aging ISs.
  - Interoperability requirements within ISs, to virtual and constructive simulations, and to C4I systems.
  - Shrinking budgets.
  - Product Line process maturity.
  - User focus - CTC-IS ORD Supplement - product of CTC-IS Integrated Concept Team (ICT) efforts Oct 96 thru Jan 98.
  - Other program success stories.
- Growing portion of Army community is pursuing Architecture-centric development.
- Evolving Acquisition Strategy must address comprehensive LTI needs in order to do more with less.

High-level Acquisition Strategy

- Objectives:
  - Work closely with user to adapt to evolving ORDs and priorities.
  - Meet urgent need at NTC - **IOC 4Q FY06**.
  - Enable Product Line development/sustainment.
  - Ensure Government rights to CTIA.
  - Reduce risk associated with Product Line approaches.
  - **Adapt to near-term funding limits**.
  - Conform to rational funding profile.
  - Plan for backwards compatibility vs obsolescence as appropriate.
  - Incentivize Industry participation.

Proposed High Level LTI Program Structure



Why Have a Downselect?

- Reduces risk inherent in source selection:
  - Allows Government to observe actual work.
  - Reinforces Past Performance evaluations.
  - Refines full-scale EMD proposal reducing future confusion.
  - Allows industry to demonstrate proof of principle for innovative ideas.
- Fits funding constraints:
  - FY01 RDT&E is insufficient to award full-scale EMD effort early in the FY.
  - If POM submission is funded, FY02 funds will demand a first quarter start with an aggressive schedule.
- Produces alternative approaches.

Assessment criteria are key to success in a downselection!

Products of Six Month Effort

- LTI/CTIA Common Specification(s).
- CTIA V0.1:
  - Scope.
  - Definition.
  - Structure.
  - Models.
- Full-scale EMD proposal:
  - Government may be involved similar to ECP process.
  - Competition will still be a factor.
- Process descriptions:
  - Domain Engineering.
  - System Engineering.
  - Software Engineering.
  - Program Management.
  - Configuration Management.

Demonstrate working model to Government stakeholders

Address evaluation criteria/metrics.

Contracting Options/Approaches

Separate Competitions for LTI /CTIA and Each OIS Product

- Pros:
  - Reduces risk Government will become reliant upon single vendor's proprietary systems.
  - Promotes competitive pricing for each product.
- Cons:
  - Difficult for Government to ensure Product Line compliance.
  - More difficult to retrofit fielded OISs.
  - Increased schedule risk due to need for additional source selection activities and ramp-up time for winners.
  - More difficult to transfer institutional knowledge from CTIA.

Reduces cost risk, but increases performance and schedule risk.

Contracting Options/Approaches

Single Competition for LTI /CTIA with OIS Product Options

- Pros:
  - Reduces risk that a product will not comply with Product Line standards.
  - Reduces schedule risk.
  - Incentive to LTI/CTIA contractor.
  - Best value offeror for LTI/CTIA is likely highly qualified to build the products.
  - Government retains option to recompete.
  - Easier to manage Product Line evolution across all products.
- Cons:
  - Increased risk LTI/CTIA suboptimized for first OIS product - NTC.
  - Non-competitive environment as ECPs stack up may increase cost.
  - Increased risk that Government will be reliant upon single vendor's proprietary products - makes upgrades more expensive and difficult.

Increases cost risk, but decreases performance and schedule risk.

Contracting Options/Approaches

Government Development of LTI/CTIA

- Pros:
  - Lowest risk Government will become reliant upon single vendor's proprietary systems.
  - Guarantees Government ownership of CTIA.
  - Promotes competitive pricing for each product.
- Cons:
  - Government may lack sufficient expertise to develop CTIA in-house.
  - CTIA becomes pure GFI - difficult to hold contractors accountable for performance of OIS products.
  - Government becomes LTI integrator, increasing integration risk.
  - Government will have difficult time verifying OIS Product compliance.
  - More difficult to retrofit fielded OISs.
  - Increased schedule risk due to need for additional source selection activities and ramp-up time for winners.

Consider only if funding for CTIA is severely limited.

> Reduce scope of architecture!

PDRR Output

- ARL:UT contract deliverables through Dec 2000:
  - Functional and Performance Specifications that address all LTI ORDs.
  - Functional Architecture.
  - Domain Model Reports
    - NTC
    - JRTC
    - CMTC
    - HITS
    - MOUT
  - Knowledge Acquisition Reports
  - Resource Models
  - Performance Models

Ultimately leads to "OIS Domain Model."

PDRR Output - Continued

- Acquisition Strategy:
  - Single Acquisition Management Plan (SAMP).
  - Acquisition Program Baseline (APB).
  - EMD Acquisition Plan.
  - EMD RFP - target 4Q FY00.
  - Budget (FY02-07 POM).
- LTI Product Line Management Plan.
  - Common Training Instrumentation Architecture (CTIA) management plan.
  - Configuration Control Board (CCB) plan.
  - LTI Sustainment plan.

LTI RFP Expectations

- Performance-based with select mandatory standards:
  - Joint Technical Architecture - Army (JTA-A)
  - High Level Architecture (HLA) for modeling and simulation.
  - Technical Architecture Framework for Information Management (TAFIM)
  - Army Training XXI Technical Architecture (ATTA)
- Process-driven development and management of CTIA.
- Cost Plus Award Fee (CPAF).
- Data Rights clauses will be key.
- Earned Value Management (EVM).
- Contractor Integrated Technical Information System (CITIS) for both STRICOM and users.
- Concurrent Engineering (restricted somewhat by STRICOM post-QDR personnel availability).

Program Management Risks
Funding

- Significant up-front investment required for CTIA and component reuse.
- Long term savings projections mean smaller budgets.
- Legacy system “competition” for resources.

- Status:
  - LETS Strategy briefed to Training Mission Area (TMA) Councel of Colonels urged consolidation of One-TESS and LTI funding lines.
  - STRICOM will submit LTI budget for FY02-07 POM by 30 Sep 99.

- The outcome of the POM will be critical to LTI.
  - LTI team will provide some sort of update to Industry to share general results of the POM process.

Program Management Risks
Schedule

- NTC-OIS required FY06.
- "Architecture First" approach could reduce effective development time for NTC.
- Development of OIS products will overlap.
  - Synchronization of development efforts is challenging.
  - LTI Product Line Manager must be prepared to simultaneously coordinate with multiple geographically dispersed customers.
- One-TESS Production Line may not be ready in time for NTC-OIS.
  - May need capability to work with legacy TESS devices until OneTESS is ready.
- Scheduling windows for installation and retrofits at the CTCs is difficult.

Program Management Risks Performance

- Relationship to TESS (legacy or OneTESS) not well defined.
- Balance hardware and software architecture needs based upon informed business decisions.
- Diverse and complex LTI requirements demand well-rounded development team.
  - Communications.
  - Information Systems.
  - Instrumentation.
  - Modeling and simulation.
  - Military analysis.