


Writing a good SOW

UMBC CMPE451 Capstone
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Week 1 1-1



What makes a good SOW?

- **A good Work Breakdown Structure**
 - The WBS is the outline for the Statement of Work document
 - Name the tasks: again verb phrases are good
 - Hierarchical organization
 - Generally outline numbered (1, 1.1, 1.1.1, etc)
 - Tasks should be ~2 weeks in duration
- **A narrative description of the tasks in terms of the *work to be done...***
- ***...not the requirements to be satisfied***
- **Active verbs are good!**
- **A deliverable or some kind of indication that the task is done!**
- **Generally “shall”, sometimes future tense.**

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Week 1 1-2

What doesn't make a good SOW

- Mixing "shall" and "will"
- Technical requirements don't belong in the WBS/ SOW
- Missing deliverables
- Imprecise task descriptions

Task 1: System Engineering. The system engineering task will ensure that all operational scenarios are identified when the program is kicked off. The [redacted] team will develop a system plan that includes the the key approach and strategy for the WANN architecture. It will cover approaches to baseband processing, RF processing, broadband antennas, and networking features that optimize the best WANN performance leading to a \$500 target. Any other relevant trades will be performed and presented at CDR. As part of this task, the [redacted] Team will publish an open network API specification for review by potential developers.

Task 2: Generate Radio Specifications. A detailed radio node specification will be developed based upon the requirements flow-down. The [redacted] team will breakdown each section according to the architecture elements. The predicted performance based on these specifications will be simulated and analyzed for feasibility.

Task 3: WANN design. The WANN design will include predicted radio performance for the filter design, the antenna design, RF baseband processing approach and strategy as well as support for network adaptation. A detailed plan will be laid out to mitigate long-lead component delivery and that will identify and reduce the risk leading to a long-term approach through R4. The designs for each subsection will include a comprehensive risk mitigation plan to identify and alleviate performance versus cost issues. Phases R2-R4 improvements will be planned as part of the WANN design to include an evolution toward advancements in lower cost technologies. Pre-planned, low-cost improvements include technology insertion options from other DARPA programs, including but not limited to ASP, MNM, XG, CN, and DTN.

Task 4: Critical Design Review. The [redacted] team will document the WANN architecture and present the system approach at the CDR. Complete designs and approaches for the subsystems, including performance objectives and predictions will be presented. The WANN architecture that is presented at CDR aside from pre-planned product improvements (P³I) will remain constant throughout the remaining phases, only the implementation will be