

US Strategic Command Force Studies

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As the unified command in charge of U.S. nuclear forces, U.S. Strategic Command (STRATCOM) periodically conducted force structure studies during the 1990s to assess the impact that arms control, new weapons, and world changes on the nation's security and the viability of the Single Integrated Operating Plan (SIOP) and other nuclear war plans. These studies not only became the basis for the START II Treaty and 1994 Nuclear Posture Review, they also continue to shape future arms control and force modernization.

This section of the Nuclear Files includes brief descriptions and copies of six different force structure studies and briefings conducted by STRATCOM (and its predecessor Strategic Air Command) between 1991 and 1996. The six studies are the [Phoenix Study](#) from 1991, STRATCOM's [briefing](#) to Defense Secretary Richard Cheney and Chair Joint Chief of Staff Colin Powell in 1992, the [Sun City](#) study from 1993, the [Sun City Extended](#) from 1994, STRATCOM's [white paper](#) on post-START II arms control options from 1996, and STRATCOM's [Warfighter Assessment](#) of post-START II Arms Reductions from 1996.

Other agencies also provided input to nuclear posture and arms control agenda. But STRATCOM's force structure studies illustrate the considerable leverage this nuclear "super-command" had and continues to have on the formulation of US nuclear strategy and policy. These force structure studies provide a unique and rare glimpse into the secret corridors of the nuclear priesthood. As such they are essential for the public's ability to understand and assess the Bush administration's nuclear posture review expected to be completed in 2001. The main nuclear planning principles identified in the STRATCOM documents for maintaining a credible deterrence are:

- Maintain a Triad of nuclear forces;
- Actual posture is a Twin Triad with SSBNs and ICBMs carrying day-to-day deterrence burden and bombers providing back-up;
- Maintain two-ocean SSBN force with full target coverage in both oceans, large operating areas, and maximum reconstitution (upload) capability;
- Protect MIRV on SSBNs;

- Retain warheads a level consistent with warfighting needs;
- Nuclear forces must be highly flexible, i.e. retain weapon platforms and most capable systems;
- Nuclear war planning system must be robust and highly flexible;
- Nuclear forces must be survivable;
- Command and Control (C2) connectivity must be survivable;
- Continue modernization of remaining forces;
- Secure hedge and reconstitution (upload) capacity;
- Arms control must ensure stability: retain most capable U.S. systems (including first strike and prompt retaliatory launch), but reduce most threatening Russian systems.

The unilateral Presidential Nuclear Initiatives from September 1991 and January 1992 were effective in breaking the deadlock of lengthy and complicated arms control negotiations. To the nuclear planners at US Strategic Air Command (subsequently STRATCOM), however, the initiatives brought confusion, uncertainty, and even danger. As the primary nuclear command, STRATCOM set out to restore order and predictability in the arms control process through its main asset: expertise in nuclear war planning and analysis. Very few people in the White House or the Congress had ever read the SIOP -- much less understood the methodology that created the justification for why the Pentagon needed a certain number of nuclear warheads deployed on a certain number and type of delivery platforms to deter a certain enemy. Through the detailed analysis and lobbying conducted in support of the force structure studies from 1991 to 1996, STRATCOM not only managed to contain the ambitions for nuclear disarmament that marked the early phases of the 1994 Nuclear Posture Review and slow down the arms control process. It also largely succeeded in establishing the overall parameters by which nuclear weapons reductions should be measured in the future.

Nowhere are those parameters more evident than in the 1993 [Sun City](#) study. By prescribing a "penalty for capability lost," it is not surprising that deeper cuts in nuclear weapons were deemed as unjustifiable unless the remaining forces became much more flexible and capable of doing the job. The "preferred force structure" established by Sun City not only became the Nuclear Posture Review and the START II Treaty, but it also reaffirmed a "warfighter" mentality that continues to influence START III and future arms control thinking. This warfighter mentality builds on assumptions in the [Phoenix Study](#) from the Cold War about fighting and winning nuclear wars with survivable and superior forces by inflicting calculated and highly orchestrated damage to groups of targets in order to incrementally impact specific sections of the enemy's warfighting capability. To the nuclear planners at STRATCOM, this warfighting mentality is as fundamental to a "credible" nuclear deterrent today as during the Cold War.

Because of this warfighting culture and its demand for a highly flexible and decapitating posture, nuclear forces can only be cut so much before the ability to inflict sufficient damage in enough specifically tailored and orchestrated scenarios is undermined. Granted, the President can always issue new guidance for how much damage is enough, but in reality the expertise for calculating this and translating it into a "credible" deterrent remains firmly in the hands of STRATCOM.

The content and structure of the different studies also provide indications on how the focus of nuclear planning changed during the 1990s. As the force structure issue itself settled down in the 1994-1995 period with the START II treaty and the Nuclear Posture Review, the question of who the enemy was gained more prominence. Most of the effort in the first three studies, for example, focused on the balance of the Triad, the number of warheads, and the flexibility of the war planning

system. At the time the residual Soviet nuclear arsenal in Russia and the other ex-Soviet states remained the focus. Although the [Sun City Extended](#) study from 1994 also focussed on Russia, a greater portion of its content was dedicated to examining various threat scenarios involving particularly China and so-called "rogue" states. This evolution has continued and peaked in 1998 with China being included in the SIOP after a hiatus of 16 years.

Beyond the war planning itself, the force structure studies also provide insight into some of the rationales for how and why certain arms control terminology crept into U.S. national security objectives. Most important is the so-called hedge, which established an insurance in modern arms control by keeping thousands of nuclear warheads removed from delivery vehicles by arms control agreements in reserve in case Russia returned to a totalitarian regime. This reserve has gradually increased to the point that, when the START II is implemented in 2007, the U.S. has enough extra warheads in inactive storage to quickly reconstitute (upload) the operational stockpile back to START I levels. While this may seem a prudent precaution to some, the hedge also allowed Russia to retain thousands of extra warheads, and created a shadow-arsenal on both sides that arms control planners are now struggling to identify and bring under control.

At the beginning of the 21st century, the emphasis of U.S. nuclear force planning is still based on the principles and findings of these force structure studies. Even though President Clinton in 1997 issued new guidance to the war planners that reportedly removed all previous requirements for planning to fight and win protracted nuclear wars, the nuclear posture that resulted from the nuclear force structure studies in the 1990s -- and the modernization of the nuclear war planning system that flowed from it -- means that much remains the same: protracted nuclear war or not, STRATCOM still has to "win" any nuclear clash whether it be with Russia, China, or so-called "rogue" states. A "credible deterrence" is still defined by flexible, multiple-system, and hardened forces on hair-trigger alert ready to launch on short notice. Unless President Bush's Nuclear Posture Review removes the warfighter from nuclear planning, little will change except the number of warheads.

FOIA documents

[The Phoenix Study](#) (1991)

[Briefing: TRATCOM's View](#) (1992)

[The Sun City Study](#) (1993)

[The Sun City Extended Study](#)(1994)

[White Paper: Post-START II Arms Control](#) (1996)

[Post-START II Arms Reductions: The Warfighter's Assessment](#)(1996)

Also available

["The Matrix of Deterrence"](#)

a summary report analyzing all six force structure studies

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