
A BILL FOR AN ACT

MAKING AN APPROPRIATION TO UPGRADE THE TELECOMMUNICATIONS SYSTEM
OF THE HAWAII COUNTY POLICE DEPARTMENT.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that there is a critical
2 need to upgrade the telecommunications system of the Hawaii
3 county police department to enhance public and police officer
4 safety. This need is evidenced by deficiencies in the present
5 communications system in the area of inadequate radio coverage,
6 due in part to the distinctive geography of the island,
7 punctuated with the unique topography of the island's many
8 valleys and mountains. The existing system's unreliability, the
9 inability to restore the system in a timely manner, and channel
10 congestion are also major concerns. Secondary to these problems
11 are the system's lack of voice security, the need for multiple
12 channels to cover a single district, the sporadic nature of in-
13 building service with hand-held two-way radio units, and the
14 overall poor quality of radio communication in specific
15 locations. There are an insufficient number of non-interfering
16 frequencies available in the present communications band to
17 resolve these problems. The events of September 11, 2001 have



1 forever changed the definition of "normalcy" that society has
2 experienced in the past. This becomes more evident with the
3 continuous threats and acts of terrorism that are occurring. A
4 major component in responding to any acts of terrorism or
5 disasters involves the interoperability of the public safety
6 community.

7 The legislature also finds that, coupled with the inherent
8 problems of the existing system, the county of Hawaii is
9 mandated and in the process of making changes to the present
10 radio system as a result of the Federal Communication Commission
11 rules under part 88, known as the "Refarming Act," and the
12 Federal Communication Commission reallocation of the 2 GHz
13 microwave, which the county of Hawaii currently uses, to private
14 communications services. The need to further upgrade the county
15 of Hawaii's police telecommunications system is evidenced by the
16 overall growth of the population and visitors to the island of
17 Hawaii and the ever increasing number of calls for police
18 service via the E-911 emergency telephone system. The most
19 viable solution to these problems is to upgrade the existing
20 system by acquiring a modern 700 MHz trunked radio system,
21 coupled with a digital microwave "backbone."



1 The legislature further finds that the salient reason for
2 converting to the 700 MHz system is that the State of Hawaii is
3 currently developing the 700 MHz regional plan that proposes to
4 allocate an adequate number of radio channels in 700 MHz
5 frequency band specifically for public safety use. Since the
6 allocation is exclusively for public safety, it provides a very
7 low potential for radio interference and increased channel
8 privacy. Lastly, 700 MHz trunking technology makes possible
9 much more efficient utilization of the radio spectrum, greatly
10 enhanced functional capabilities, the quickest availability of
11 new technology, and extensive interoperability among different
12 departments or agencies operating on the system. Trunking not
13 only offers frequency efficiency, but will provide maximum
14 flexibility for multiple users, operational applications,
15 expansion capability, flexibility for restructuring, protection
16 from loss of an individual repeater, and other multiple
17 features, including the ability to support mobile data
18 terminals. The trunking system will overcome the limitations of
19 the existing radio system and permit future growth. This
20 telecommunications system will be instrumental in coordinating
21 the response by county, state, and federal agencies in disaster
22 or other emergency situations. Acquiring a new loop microwave



1 system, developing additional radio sites, and renovating or
2 expanding existing sites, or both, are paramount because
3 infrastructure is essential for the success of the new trunking
4 radio system.

5 The legislature further finds that the 700 MHz frequency
6 band is effective for public safety use. Currently, the city
7 and county of Honolulu operates on an 800 MHz trunking system
8 but is contemplating switching to a 700 MHz system because of
9 inherent problems with interference. The counties of Maui and
10 Kauai are also currently operating on an 800 MHz trunking system
11 and must maintain an independent radio infrastructure to operate
12 on the assigned frequencies within the 800 MHz spectrum. The
13 700 MHz trunked radio system can provide a common, integrated
14 radio backbone infrastructure that can be shared by all county,
15 state, and federal agencies.

16 The legislature further finds that in July of 1995 the
17 Hawaii county council hired a consultant firm, Schema Systems
18 Inc., from Whittier, California, which completed an 800 MHz
19 feasibility study. The study encompassed an analysis of the
20 present radio operations, including the existing microwave
21 system and radio facilities. The study also pointed out the
22 deficiencies and the needs and requirements of the individual



1 departments that utilize the system. It also gave an in-depth
2 analysis and conversion costs for transforming the existing VHF
3 system to an 800 MHz trunked system. The conversion costs would
4 be substantially similar to converting the existing VHF system
5 into a 700 MHz trunked system.

6 SECTION 2. There is appropriated out of the general
7 revenues of the State of Hawaii the sum of \$24,000,000, or so
8 much thereof as may be necessary for fiscal year 2006-2007 for a
9 grant-in-aid to the county of Hawaii for the Hawaii county
10 police department to do the following:

- 11 \$720,000 - For detailed 700 MHz system engineering,
12 system specifications, bidding and
13 consulting engineer.
- 14 \$18,720,000 - For equipment, installation and project
15 management.
- 16 \$960,000 - For system and equipment warranty, spare
17 parts, and trunked system test equipment.
- 18 \$2,400,000 - For facilities improvement and new-site
19 development.
- 20 \$240,000 - For consultant, final and detailed
21 engineering, system specifications, and
22 bidding for a 6 GHz digital microwave.



H.B. NO. 2529

Report Title:

Public Safety; Telecommunications; Appropriation

Description:

Appropriates \$24,000,000 as a grant-in-aid to the county of Hawaii to upgrade the police department's radio system from a VHF system to a 700 MHz trunked radio system with a digital microwave backbone.

