

Target Building Network Comments
(From Bill DeVan, ~~4/19/01~~6/01)

1. ~~This document provides suggestions for installing the communications infrastructure in the target building to provide network communications throughout the target building. (The present building design has limited network coverage).~~ This document summarizes the present state of the Target Building communications infrastructure. It includes decisions made at the Target 60% Title II design review on 6/5/01. See attached sketches 1-9 for proposed locations of network equipment. Also see attached block diagram for a “strawman” architecture.
2. I am viewing this information as “design guidance” rather than a scope change. It is my understanding that Knight is supposed to come up with a workable office network infrastructure for the target building, and this proposal is simply one way of accomplishing that. If this is not the case then we need to regroup.
3. Every new rack will need 120 VAC (but not UPS).
4. Assume each rack (and internal patch panels) will be provided by SNS as “Government Furnished Equipment” (GFE). The installation contractor will pick up the rack, install the rack, and then terminate building communications cables to patch panels in the rack.
5. For now I am assuming that communications racks are the standard 19” rack variety, are approximately 2’W X 3’D, and need front and rear access. (I have cheated on the rear access in a couple of places where there was insufficient room). I plan to look into using a smaller box but for now let’s assume 19” racks.
6. Each new rack will need a multimode fiber connection to a communications room. See the table below for what connects to what. Also see the block diagram. I am assuming this is part of the AE/CM scope of work since it is part of the office network infrastructure.
7. I suggest we have two pairs of backbone fiber cables between the Front End Building and Target Building now:
 - One pair to TA-B110: the “control system backbone connection”
 - One to TA-B103 the “office/instrument backbone connection”

Then we can do away with the backbone cables to comm. room TA-127, and use comm. room TA-127 for just local stuff.

Target Building Network Cabinets

Level	Description	Rack Names	Approx. Coord.	Show on Location Plan:	Intra-Target Bldg. fiber cables to central comm room:	Ref.:
Basement	Comm. Room TA-B110 (NE sector)	Tgt_ICS:B110Cab01 Tgt_ICS:B110Cab02	I-13	E4.B1.47	N/A	Sketch 1
Basement	Network rack in room B158 <u>B142</u> (South, middle sector)	Tgt_ICS: B158Cab01 <u>B142Cab01</u>	C-10	E4.B1.46	TA-B110	Sketch 2
Instr. Floor	Comm. Room TA-103 (NE sector)	Tgt_ICS:103Cab01	J-12	E4.01.44	N/A	Sketch 3
Instr. Floor	Comm. Room TA-127 (SE sector)	Tgt_ICS:127Cab01	B-13	E4.01.49	TA-103	Sketch 4
Instr. Floor	Network rack in room TA- 102-112 (N. side of hot cells)	Tgt_ICS: 102Cab01 <u>112Cab01</u>	G-9	E4.01.45	TA-103	Sketch 5
Instr. Floor	Network rack in room TA-123 (S. side of hot cells)	Tgt_ICS:123Cab01	D.5-10	E4.01.46	TA-103	Sketch 6
Level 2 mezzanine	Network rack in room TA- 218-219 (SW. mezzanine)	Tgt_ICS: 218Cab01 <u>219Cab01</u>	C-4A-2.5	E4.02.43	TA-103	Sketch 7a
<u>Level 2 mezzanine</u>	<u>Network rack in room TA-203 (NW. mezzanine)</u>	<u>Tgt_ICS:203Cab01</u>	<u>K-2.5</u>	<u>E4.02.41</u>	<u>TA-103</u>	<u>Sketch 7b</u>
Level 3	Network rack (N. side)	Tgt_ICS:303Cab01	G-8	E4.03.45	TA-103	Sketch 8
Level 3	Network rack (S. side)	Tgt_ICS: 303Cab02 <u>303Cab01</u>	E-10	E4.03.45	TA-103	Sketch 9

**PROPOSAL FOR TARGET BLDG.
NETWORK INFRASTRUCTURE:**

CONTROL SYSTEM NETWORK:

OFFICE/INSTRUMENT NETWORK:

