



VDC with Vmail vs. PDA-184

Performance & Use Case Comparison

pages 2-9: Executive Summary
pages 10-29: Complete Test Results

VMail .vs. PDA-184 Test Cases

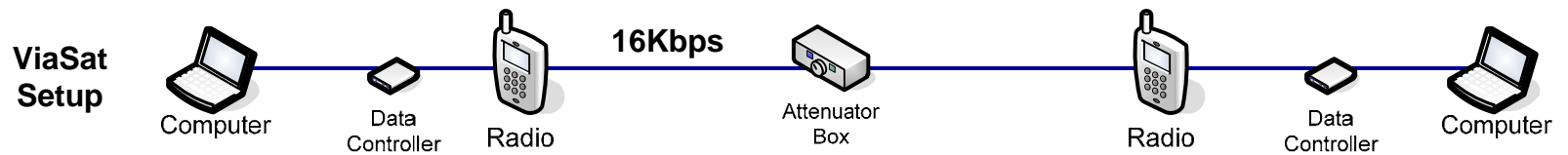
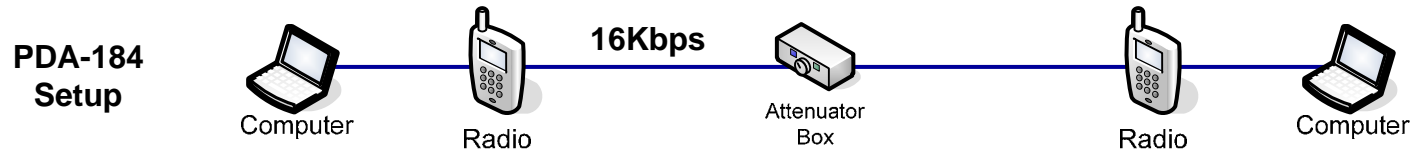


- **The following 6 test cases were evaluated:**
 - LOS Point to Point multiple file transfers
 - LOS Point to Point transfer single file, various sizes
 - LOS Point to Point E-mails
 - DAMA Point to Point multiple file transfers
 - DAMA Point to Point transfer single file, various sizes
 - LOS Chat / Notes tests
- **Multiple file transfers, Point to Point E-mail transfers, and Chat Messaging results are discussed in these summary slides.**

VMail .vs. PDA-184 Test Configurations

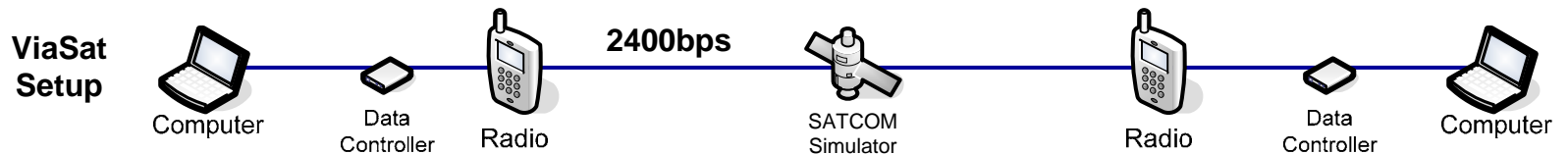
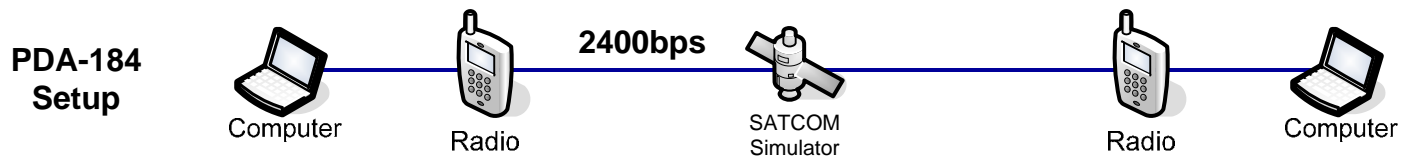
ViaSat

Line-of-Sight



25KHz DAMA

PRC-152 or PRC-117F
radios used in the tests



VMail .vs. PDA-184

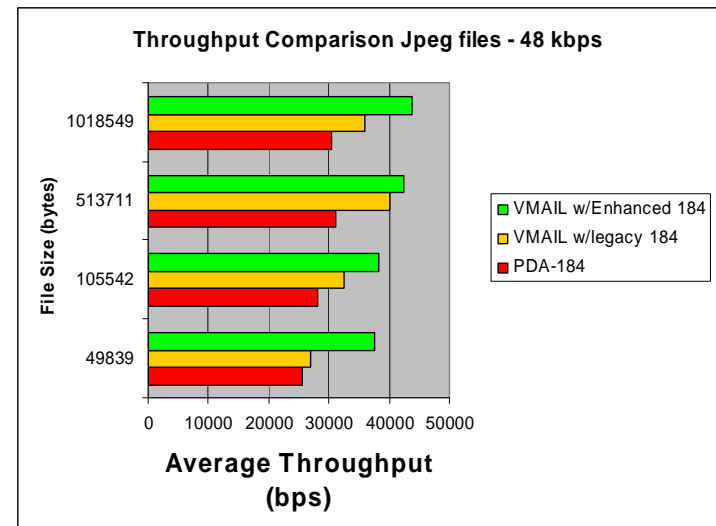
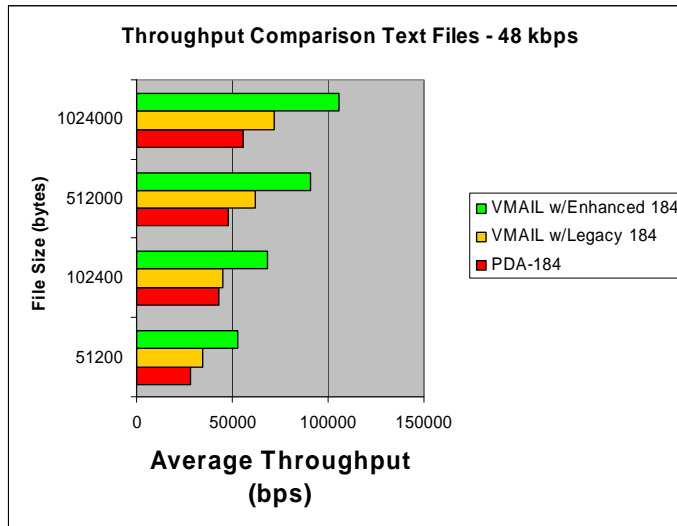
Summary of Test Results

ViaSat

- **ViaSat's VMail significantly outperforms PDA-184 during most common tactical networking use cases:**
 - Typical results for e-mail/file transfers are message transmission times that take **50% to 67% less time** than the duration required by PDA-184.
 - Typical results for file transfers are message transmission times that take **64% to 79% less time** than the duration required by PDA-184.
- **ViaSat's VMail chat sends 2.5 times more chat messages than PDA-184 in the same time period.**
- **Additional considerations:**
 - Shorter message transmission times mean less combat exposure and longer life for battery powered radios and computers
 - ViaSat's VMail provides an integrated solution for several applications such as File, E-mail, Chat, FTP interface
 - ViaSat VMail is a better choice for tactical operations than commercially available e-mail software.

VMail .vs. PDA-184

LOS 48Kbps - Single File Transfer



Test configurations and parameters	
Radio – AN/PRC 117F	
LOS 48Kbps, KG-84 Mode1 Encryption, TCM modulation	
Computer: Gateway Intel T2400, 1.83GHz, 1GB RAM	
Error free transmission – Delay timers set to minimal values FEC =1 Adaptive = NO, Probe = NO ARQ = YES, Compression = YES	
PDA-184 v4.9.3 (06/01/07) Outlook Express 6	Vmail 2.1.0 (06/2007)
Sea Level PCMCIA 3612	VDC-600 5.2.02 12-12-07
Max Packet = 256	Max Packet = 256 for Legacy, 1024 for Enhanced

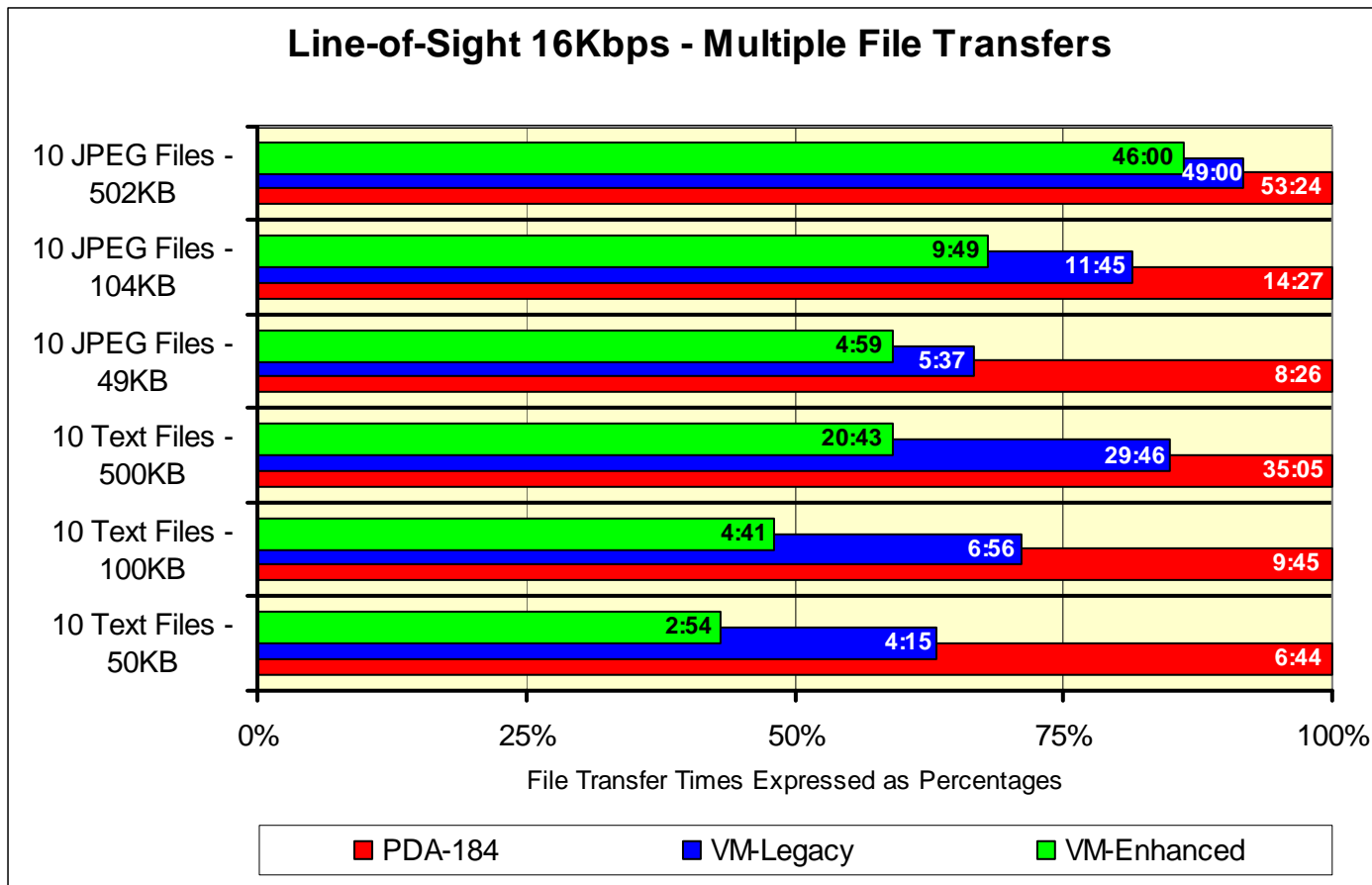
Performance comparison – Time and Throughput Improvement			
File	PDA-184 sec (bps)	Enhanced sec (bps)	Legacy sec (bps)
50k.txt	14.47 (28307)	7.77 (52693)	11.75 (34850)
100k.txt	19.00 (43123)	12.02 (68134)	18.21 (44978)
500k.txt	85.47 (47923)	45.20 (90626)	65.85 (62205)
1000k.txt	146.98 (55737)	77.54 (105644)	113.96 (71885)
49k.jpg	15.62 (25526)	10.61 (37567)	14.82 (26910)
104k.jpg	30.16 (27998)	22.12 (38176)	25.95 (32533)
502.jpg	132.39 (31042)	96.88 (42419)	102.79 (39980)
995k.jpg	267.88 (30418)	186.43 (43708)	227.20 (35864)

VMail .vs. PDA-184

LOS 16Kbps - Multiple File Transfer

ViaSat

- ViaSat's VMail using **enhanced** protocol, on the average, used only **64%** of the on-air time that PDA-184 required
- ViaSat's VMail using **legacy** protocol, on the average, used only **79%** of the on-air time that PDA-184 required

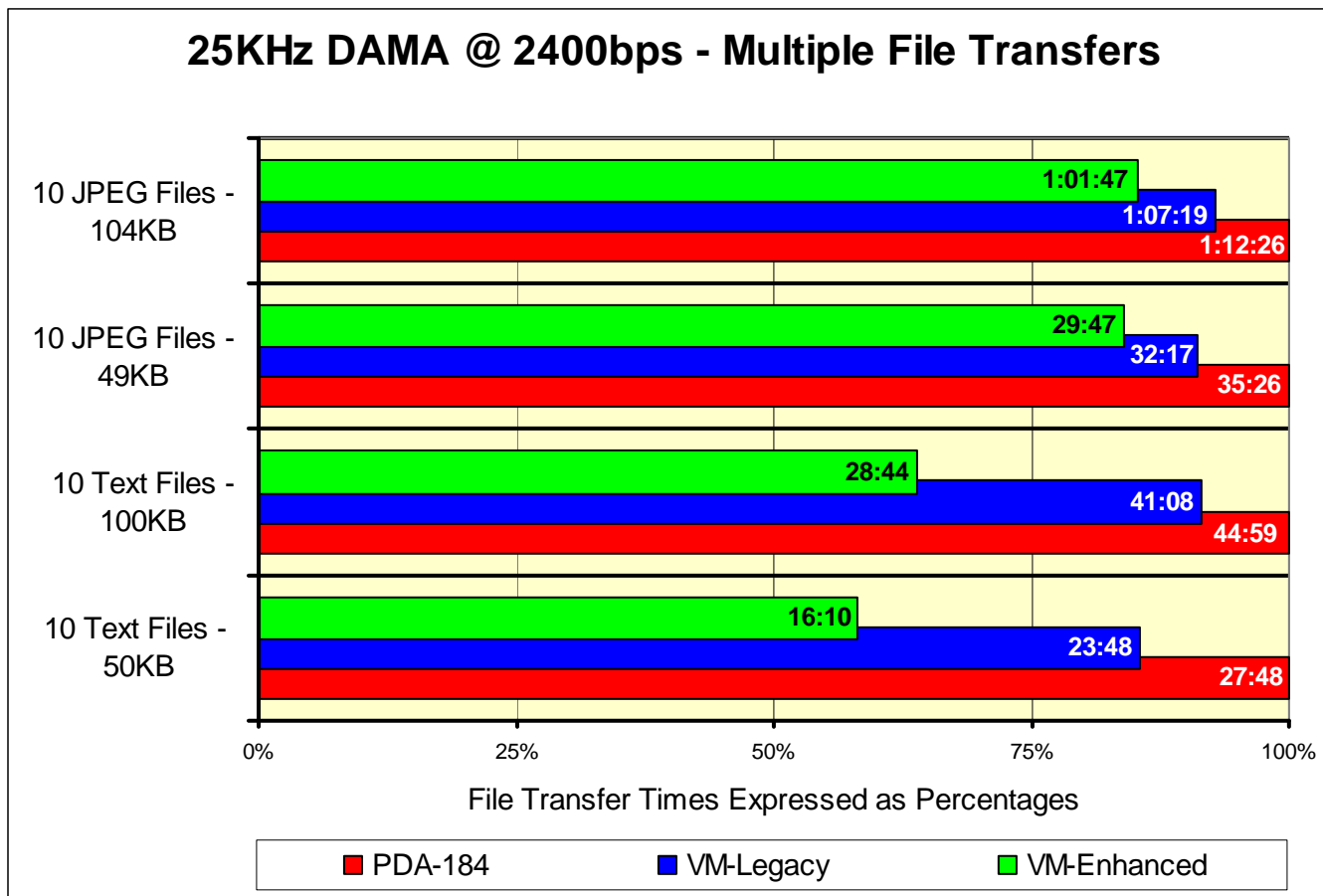


VMail .vs. PDA-184

DAMA 2.4Kbps - Multiple File Transfer

ViaSat

- ViaSat's VMail using **enhanced** protocol, on the average, used only **73%** of the on-air time that PDA-184 required
- ViaSat's VMail using **legacy** protocol, on the average, used only **90%** of the on-air time that PDA-184 required

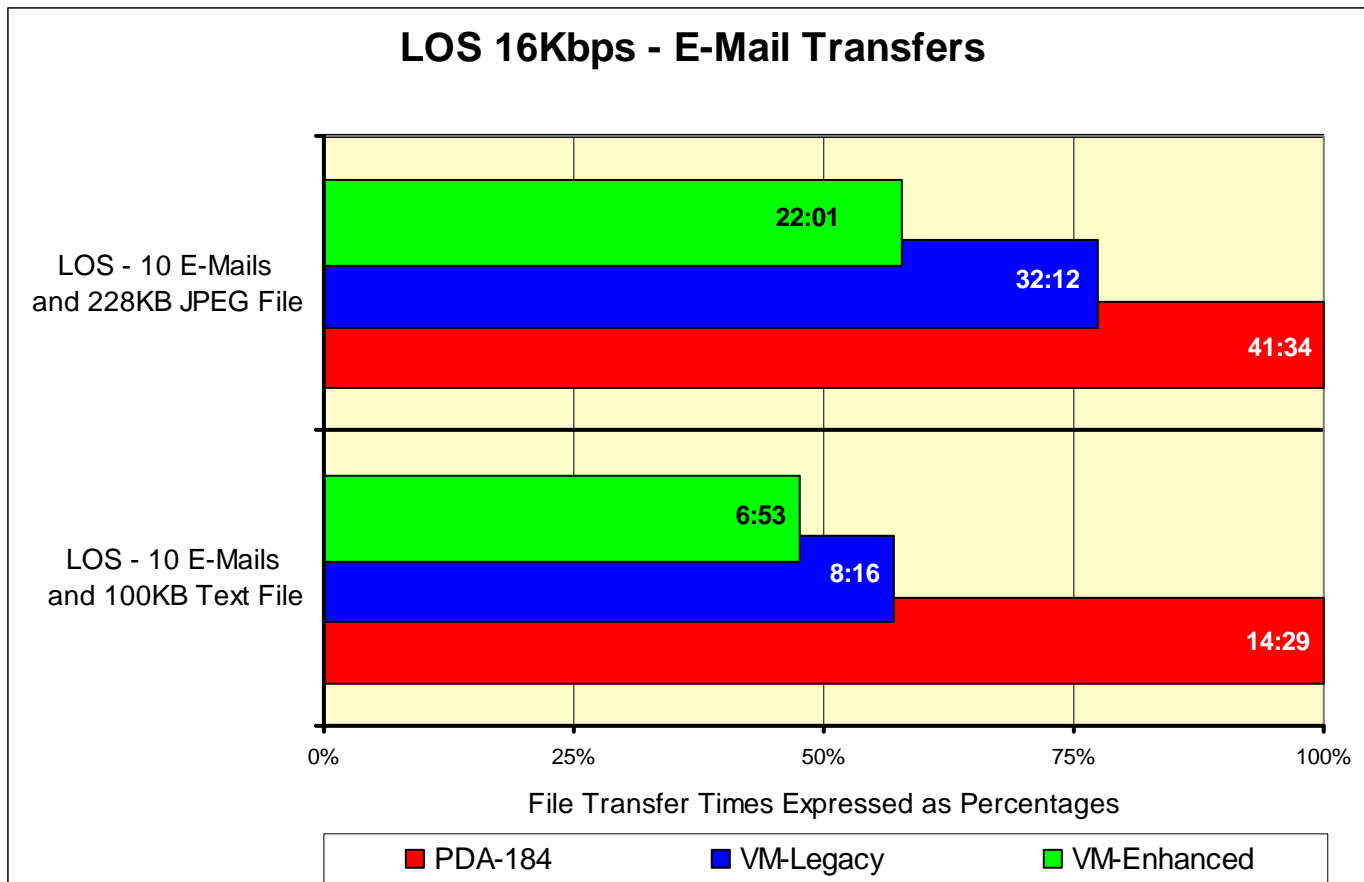


VMail .vs. PDA-184

LOS 16Kbps - Multiple E-Mail Transfer

ViaSat

- ViaSat's VMail using **enhanced** protocol, on the average, used only **53%** of the on-air time that PDA-184 required
- ViaSat's VMail using **legacy** protocol, on the average, used only **67%** of the on-air time that PDA-184 required

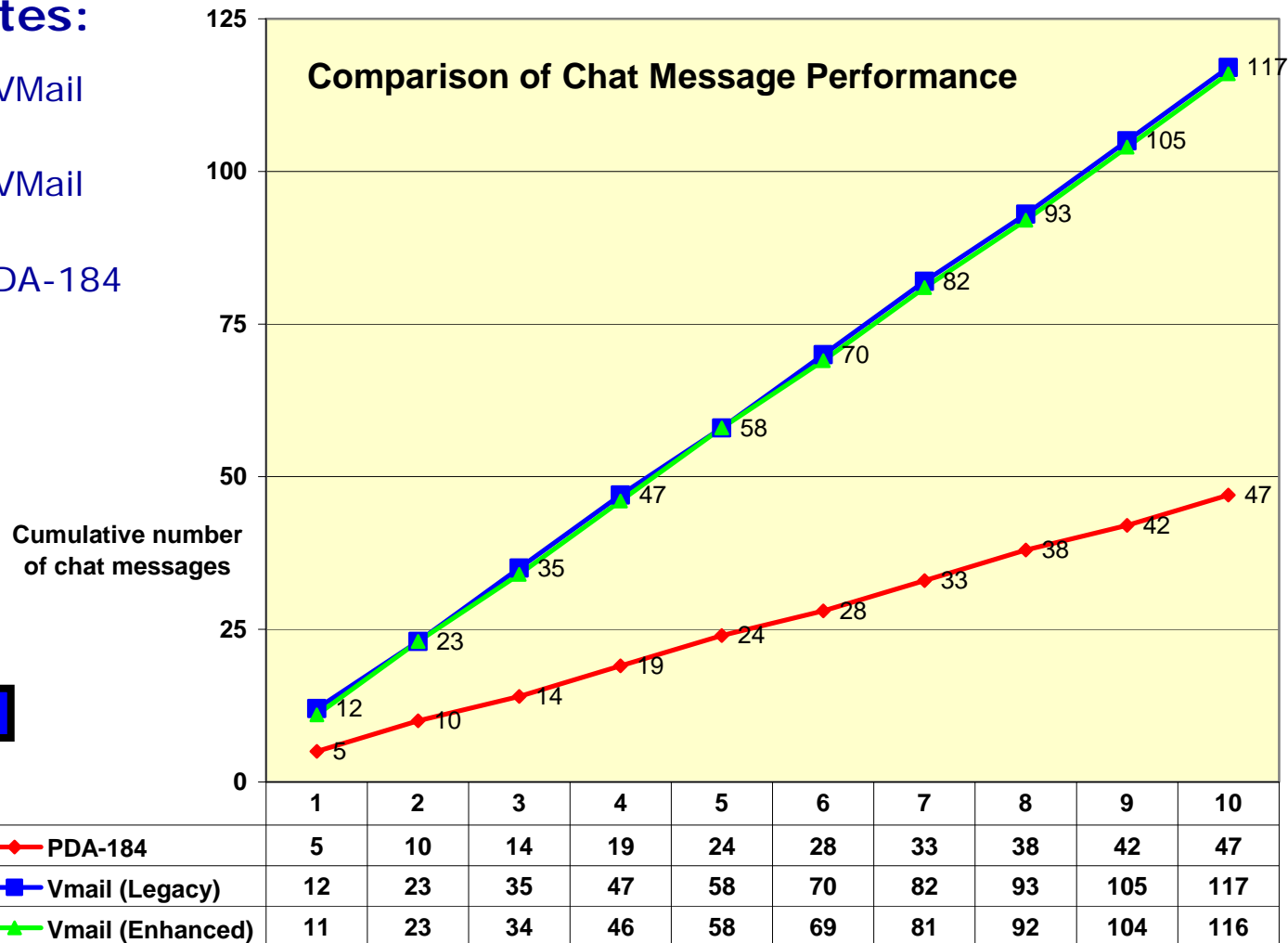


VMail .vs. PDA-184 Chat Message Results



Chat messages sent in 20 minutes:

- 117 using VMail Legacy
- 116 using VMail Enhanced
- 47 using PDA-184



Details

	1	2	3	4	5	6	7	8	9	10
—◆— PDA-184	5	10	14	19	24	28	33	38	42	47
—■— Vmail (Legacy)	12	23	35	47	58	70	82	93	105	117
—▲— Vmail (Enhanced)	11	23	34	46	58	69	81	92	104	116

Cumulative number of messages per each 2-minute test interval



VMAIL .vs. PDA-184

Complete Test Results

VMail .vs. PDA-184

Multiple Files Transfer Test

ViaSat

- **This test is to compare the performance in sending 10 text documents or image files continuously under optimal RF conditions. All delay timers were set to minimum working values. The following test procedures were used to conduct the test:**
 - Radios networked with coaxial cable and proper attenuation to ensure error free data transfers.
 - Local Address Books, configured for Point to Point data transfer.
 - Prepare 10 copies of the file being transferred from the transmitting station.
 - From the Queue Control Panel of the transmitting station, set the queue to Locked state.
 - Load the transmit queue with 10 files to be sent.
 - Change the state of the transmitting queue to Unlocked state and start the timer immediately.
 - Monitor the progress of each file transfer. Capture the time when the transmitting station receives the final burst acknowledgement. Record the time for each file transfer.

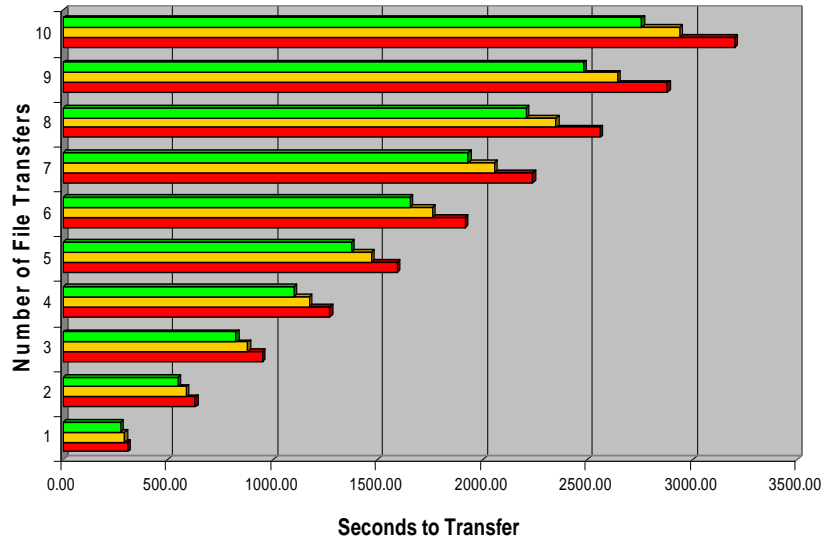
[Return](#)

VMAIL/VDC-600 .vs. PDA-184

LOS 16Kbps – 10 File Transmit - Thunderbirds.jpg (502k)



Thunderbirds.jpg (502k) File Transfer



	1	2	3	4	5	6	7	8	9	10
■ Vmail (Enhanced)	275.39	549.87	825.01	1101.68	1376.54	1654.57	1931.43	2207.87	2482.61	2759.59
■ Vmail (Legacy)	293.28	588.28	881.23	1175.48	1469.04	1762.35	2057.42	2351.53	2645.14	2939.89
■ PDA-184	306.14	628.31	950.90	1272.50	1594.50	1918.62	2238.42	2558.92	2881.73	3203.51

- **PDA-184 time (min:sec): 53:24**
- ✓ **VMail Enhanced time (min:sec): 46:00**
 - ✓ 86% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 49:00**
 - ✓ 92% of PDA-184!

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Test configurations and parameters	
Radio - Harris Falcon III AN/PRC-152	
LOS 16Kbps, FM, VISON	
Optimal RF condition -> all delay timers = 0 FEC = 1 Fixed Probe = NO ARQ = YES Hardware Compression = YES	
PDA-184 v4.9.3 (06/01/07)	Vmail 2.1.0 (06/2007)
Sea Level PCMCIA 3612	VDC-600 5.2.01 08-01-06
Max Packet = 256	Max Packet = 256 for Legacy 1024 for Enhanced

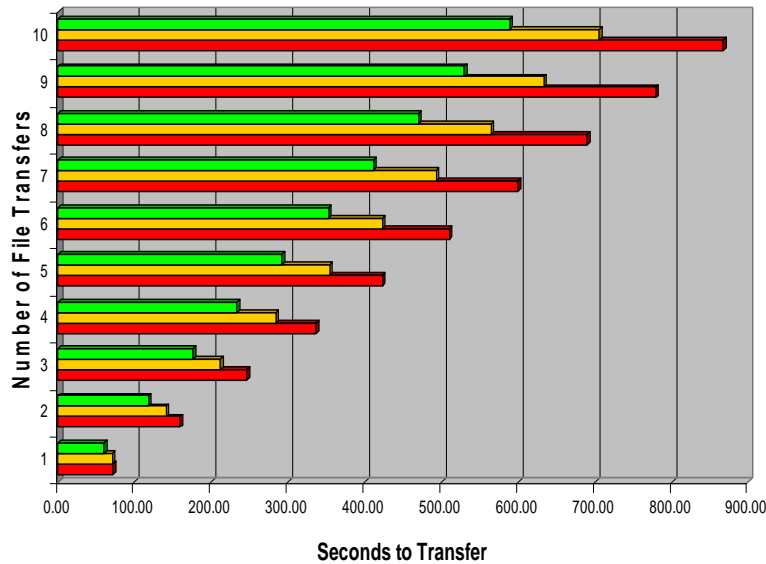
Transfer Time Comparison		
# Files	Enhanced vs. PDA	Legacy vs. PDA
1	90%	96%
2	88%	94%
3	87%	93%
4	87%	92%
5	86%	92%
6	86%	92%
7	86%	92%
8	86%	92%
9	86%	92%
10	86%	92%

VMAIL/VDC-600 .vs. PDA-184

LOS 16Kbps – 10 File Transmit - Winter.jpg (104k)



Winter.jpg (104k) File Transfer



	1	2	3	4	5	6	7	8	9	10
Vmail (Enhanced)	60.14	118.32	175.71	233.42	292.15	352.85	411.56	469.67	529.48	588.92
Vmail (Legacy)	70.37	140.73	211.65	283.65	354.10	422.54	493.00	564.57	633.29	705.17
PDA-184	71.39	158.93	246.21	336.26	422.84	509.79	599.46	689.79	779.56	866.93

- **PDA-184 time (min:sec): 14:27**
- ✓ **VMail Enhanced time (min:sec): 9:49**
 - ✓ 68% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 11:45**
 - ✓ 81% of PDA-184!

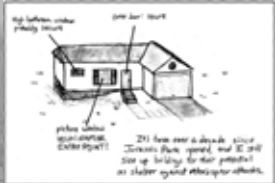
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Test configurations and parameters	
Radio - Harris Falcon III AN/PRC-152	
LOS 16Kbps, FM, VISON	
Optimal RF condition -> all delay timers = 0 FEC =1 Fixed Probe = NO ARQ = YES Hardware Compression = YES	
PDA-184 v4.9.3 (06/01/07)	Vmail 2.1.0 (06/2007)
Sea Level PCMCIA 3612	VDC-600 5.2.01 08-01-06
Max Packet = 256	Max Packet = 256 for Legacy 1024 for Enhanced

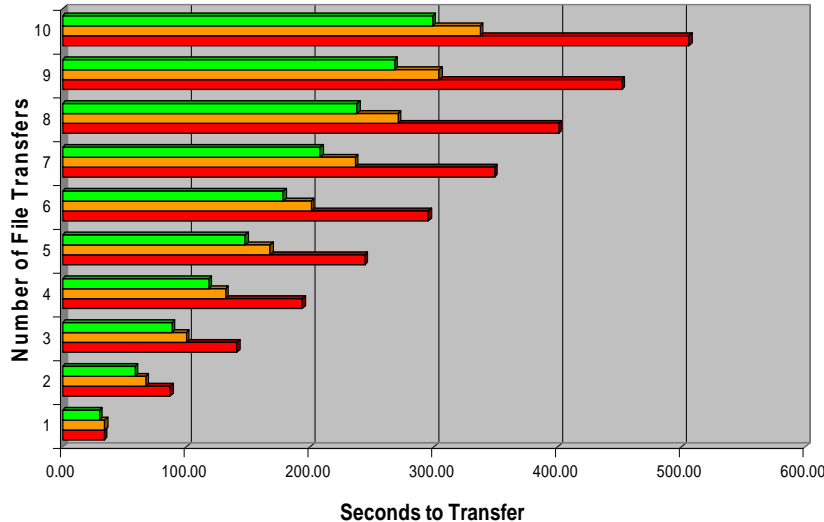
Transfer Time Comparison		
# Files	Enhanced vs. PDA	Legacy vs. PDA
1	84%	99%
2	74%	89%
3	71%	86%
4	69%	84%
5	69%	84%
6	69%	83%
7	69%	82%
8	68%	82%
9	68%	81%
10	68%	81%

VMAIL/VDC-600 .vs. PDA-184

LOS 16Kbps – 10 File Transmit - Velociraptor.jpg (49k)



Velociraptor.jpg (49k) File Transfer



	1	2	3	4	5	6	7	8	9	10
■ Vmail (Enhanced)	29.85	58.64	88.81	118.06	147.59	178.25	208.25	237.96	268.34	299.23
■ Vmail (Legacy)	34.35	67.31	99.75	131.81	167.85	200.71	236.53	271.26	304.17	337.39
■ PDA-184	33.89	86.95	140.96	193.70	244.14	295.56	349.14	400.67	452.04	506.14

- **PDA-184 time (min:sec): 8:26**
- ✓ **VMail Enhanced time (min:sec): 4:59**
 - ✓ 59% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 5:37**
 - ✓ 67% of PDA-184!

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Test configurations and parameters	
Radio - Harris Falcon III AN/PRC-152	
LOS 16Kbps, FM, VISON	
Optimal RF condition -> all delay timers = 0 FEC = 1 Fixed Probe = NO ARQ = YES Hardware Compression = YES	
PDA-184 v4.9.3 (06/01/07)	Vmail 2.1.0 (06/2007)
Sea Level PCMCIA 3612	VDC-600 5.2.01 08-01-06
Max Packet = 256	Max Packet = 256 for Legacy 1024 for Enhanced

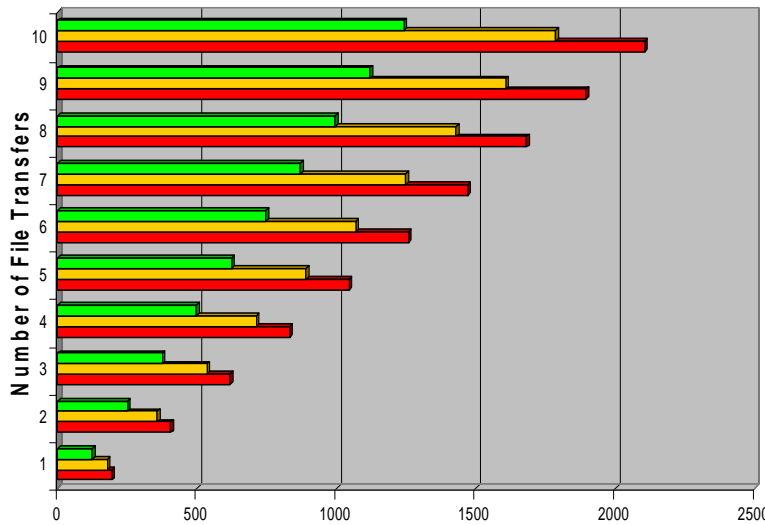
Transfer Time Comparison		
# Files	Enhanced vs. PDA	Legacy vs. PDA
1	88%	101%
2	67%	77%
3	63%	71%
4	61%	68%
5	60%	69%
6	60%	68%
7	60%	68%
8	59%	68%
9	59%	67%
10	59%	67%

VMAIL/VDC-600 .vs. PDA-184

LOS 16Kbps – 10 File Transmit - 500k.txt (500k)



500k.txt File Transfer



Seconds to Transfer

	1	2	3	4	5	6	7	8	9	10
Vmail (Enhanced)	124.54	251.15	375.42	497.53	623.06	747.16	871.25	995.37	1119.20	1243.00
Vmail (Legacy)	178.14	356.51	534.81	713.04	891.21	1070.62	1247.85	1428.85	1607.76	1785.59
PDA-184	195.62	405.15	618.39	832.01	1044.23	1257.65	1470.04	1681.15	1894.43	2105.61

- **PDA-184 time (min:sec): 35:05**
- ✓ **VMail Enhanced time (min:sec): 20:43**
 - ✓ 59% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 29:46**
 - ✓ 85% of PDA-184!

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Test configurations and parameters	
Radio - Harris Falcon III AN/PRC-152	
LOS 16Kbps, FM, VISON	
Optimal RF condition -> all delay timers = 0 FEC = 1 Fixed Probe = NO ARQ = YES Hardware Compression = YES	
PDA-184 v4.9.3 (06/01/07)	Vmail 2.1.0 (06/2007)
Sea Level PCMCIA 3612	VDC-600 5.2.01 08-01-06
Max Packet = 256	Max Packet = 256 for Legacy 1024 for Enhanced

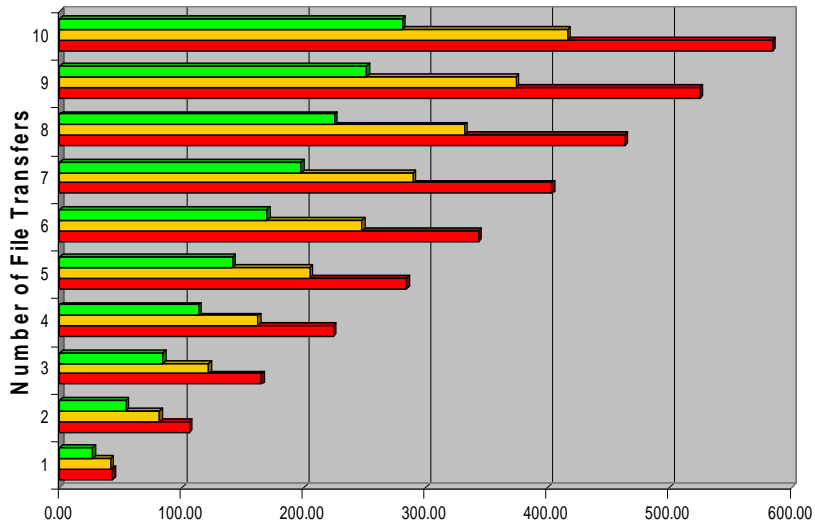
Transfer Time Comparison		
# Files	Enhanced vs. PDA	Legacy vs. PDA
1	64%	91%
2	62%	88%
3	61%	86%
4	60%	86%
5	60%	85%
6	59%	85%
7	59%	85%
8	59%	85%
9	59%	85%
10	59%	85%

VMAIL/VDC-600 .vs. PDA-184

LOS 16Kbps – 10 File Transmit - 100k.txt (100k)



100k.txt File Transfer



Seconds to Transfer

	1	2	3	4	5	6	7	8	9	10
■ Vmail (Enhanced)	26.76	54.04	84.42	113.85	141.62	170.03	197.92	225.15	251.59	280.98
■ Vmail (Legacy)	41.67	81.70	121.78	162.34	204.95	247.56	289.71	331.53	373.76	416.29
■ PDA-184	43.35	105.79	165.09	224.06	284.01	342.93	403.31	463.43	524.37	584.39

- **PDA-184 time (min:sec): 9:45**
- ✓ **VMail Enhanced time (min:sec): 4:41**
 - ✓ 48% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 6:56**
 - ✓ 71% of PDA-184!

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Test configurations and parameters

Radio - Harris Falcon III AN/PRC-152

LOS 16Kbps, FM, VISON

Optimal RF condition -> all delay timers = 0

FEC =1 Fixed

Probe = NO

ARQ = YES

Hardware Compression = YES

PDA-184 v4.9.3 (06/01/07)

Vmail 2.1.0 (06/2007)

Sea Level PCMCIA 3612

VDC-600 5.2.01 08-01-06

Max Packet = 256

Max Packet = 256 for Legacy
1024 for Enhanced

Transfer Time Comparison

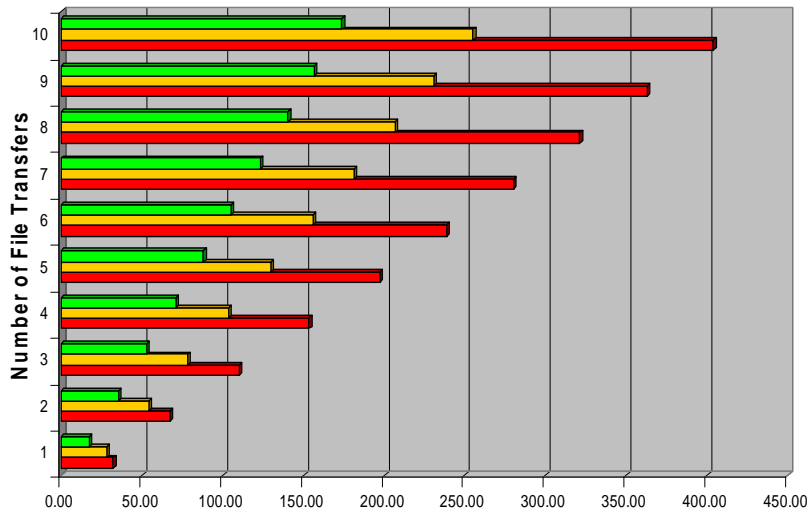
# Files	Enhanced vs. PDA	Legacy vs. PDA
1	62%	96%
2	51%	77%
3	51%	74%
4	51%	72%
5	50%	72%
6	50%	72%
7	49%	72%
8	49%	72%
9	48%	71%
10	48%	71%

VMAIL/VDC-600 .vs. PDA-184

LOS 16Kbps – 10 File Transmit - 50k.txt (50k)



50k.txt File Transfer



Seconds to Transfer

	1	2	3	4	5	6	7	8	9	10
Vmail (Enhanced)	17.30	35.57	52.82	70.82	88.00	105.20	123.50	140.51	156.81	173.82
Vmail (Legacy)	28.05	54.24	78.32	103.82	130.00	156.12	181.30	206.70	230.90	254.98
PDA-184	32.10	67.31	110.39	153.40	197.47	239.00	280.25	321.40	362.90	403.96

- **PDA-184 time (min:sec): 6:44**
- ✓ **VMail Enhanced time (min:sec): 2:54**
 - ✓ 43% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 4:15**
 - ✓ 63% of PDA-184!

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Test configurations and parameters

Radio - Harris Falcon III AN/PRC-152

LOS 16Kbps, FM, VISON

Optimal RF condition -> all delay timers = 0

FEC =1 Fixed

Probe = NO

ARQ = YES

Hardware Compression = YES

PDA-184 v4.9.3 (06/01/07)

Vmail 2.1.0 (06/2007)

Sea Level PCMCIA 3612

VDC-600 5.2.01 08-01-06

Max Packet = 256

Max Packet = 256 for Legacy
1024 for Enhanced

Transfer Time Comparison

# Files	Enhanced vs. PDA	Legacy vs. PDA
1	54%	87%
2	53%	81%
3	48%	71%
4	46%	68%
5	45%	66%
6	44%	65%
7	44%	65%
8	44%	64%
9	43%	64%
10	43%	63%

VMAIL/VDC-600 .vs. PDA-184

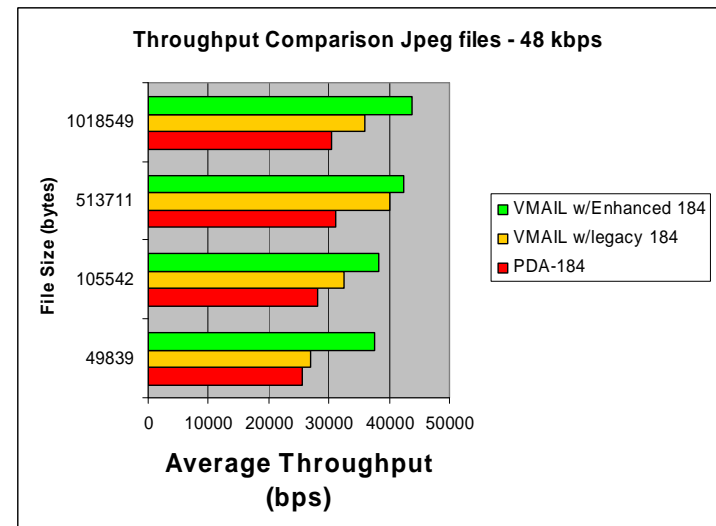
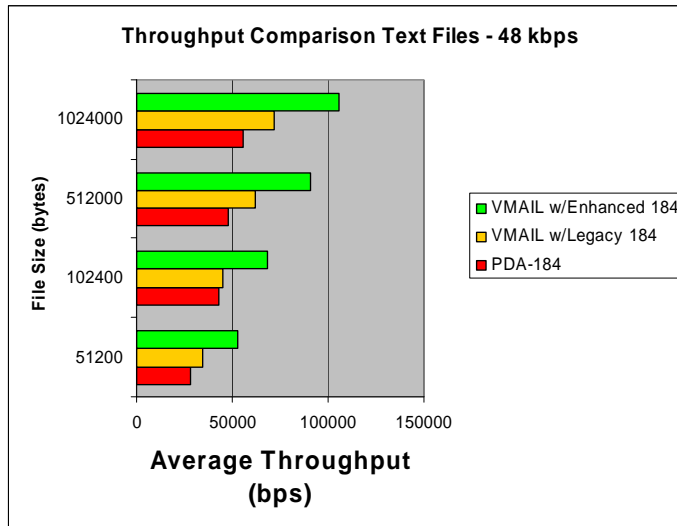
Throughput comparison at 48 Kbps



- **This test is to compare the throughput performance sending different types of files with a different radio (AN/PRC 117F) at higher speed (48kbps).**
 - Radios networked with coaxial cable and proper attenuation to ensure error free data transfers.
 - Local Address Books, configured for Point to Point data transfer.
 - Start the timer when pressing the “send” key.
 - Record the time when the last burst is acknowledged.
 - Run each file 3 times and obtain the average.
 - Calculate the throughput in bits per second based on the transfer time and the actual file size.

VMail .vs. PDA-184

LOS 48Kbps - Single File Transfer



Test configurations and parameters	
Radio – AN/PRC 117F	
LOS 48Kbps, KG-84 Mode1 Encryption, TCM modulation	
Computer: Gateway Intel T2400, 1.83GHz, 1GB RAM	
Error free transmission – Delay timers set to minimal values FEC =1 Adaptive = NO, Probe = NO ARQ = YES, Compression = YES	
PDA-184 v4.9.3 (06/01/07) Outlook Express 6	Vmail 2.1.0 (06/2007)
Sea Level PCMCIA 3612	VDC-600 5.2.02 12-12-07
Max Packet = 256	Max Packet = 256 for Legacy, 1024 for Enhanced

Performance comparison – Time and Throughput Improvement			
File	PDA-184 sec (bps)	Enhanced sec (bps)	Legacy sec (bps)
50k.txt	14.47 (28307)	7.77 (52693)	11.75 (34850)
100k.txt	19.00 (43123)	12.02 (68134)	18.21 (44978)
500k.txt	85.47 (47923)	45.20 (90626)	65.85 (62205)
1000k.txt	146.98 (55737)	77.54 (105644)	113.96 (71885)
49k.jpg	15.62 (25526)	10.61 (37567)	14.82 (26910)
104k.jpg	30.16 (27998)	22.12 (38176)	25.95 (32533)
502.jpg	132.39 (31042)	96.88 (42419)	102.79 (39980)
995k.jpg	267.88 (30418)	186.43 (43708)	227.20 (35864)

VMail .vs. PDA-184

Point to Point email Performance



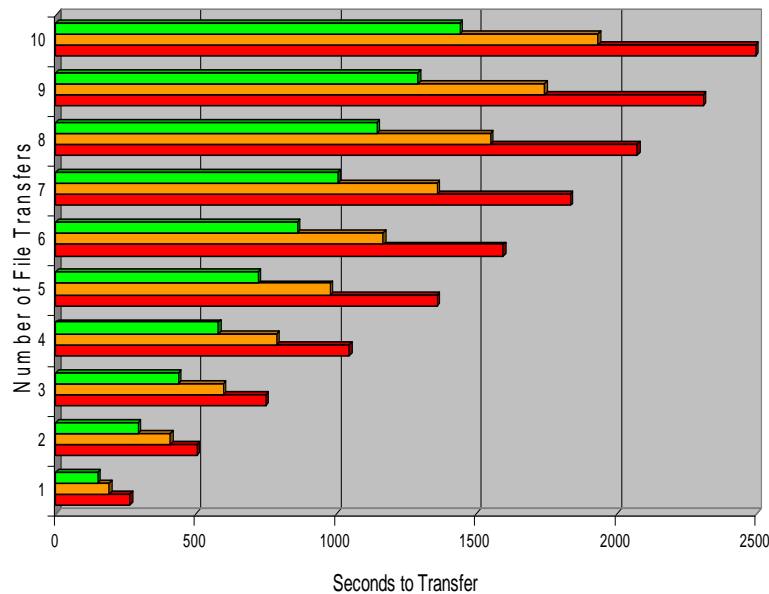
- **This test is to compare the performance in sending 10 drafted emails with attachment from one client to another. The following test procedures were used to conduct the test:**
 - Radios networked with coaxial cable and proper attenuation to ensure error free data transfers.
 - Local Address Books, configured for Point to Point data transfer.
 - From the Queue Control Panel of the transmitting station, set the queue to Locked state.
 - Draft 10 emails with the same attachment. (The data presented in this test are for 100kB text and 228kB image files.)
 - Load the transmit queue with 10 emails to be sent.
 - Change the state of the transmitting queue to Unlocked state and start the timer immediately.
 - Monitor the progress of the transfer. Capture the time when the new email arrives at the receiving station mail box. The new mail alarm works perfect for this purpose.
 - Record the arrival time for all 10 emails.

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VMAIL/VDC-600 .vs. PDA-184

LOS 16Kbps – 10 emails with 228kB image attachment

Email with image file attached (228kb)



	1	2	3	4	5	6	7	8	9	10
Vmail (Enhanced)	150	293	438	579	720	862	1005	1145	1291	1441
Vmail (Legacy)	190	408	597	787	977	1167	1358	1549	1742	1932
PDA-184	264	504	748	1046	1358	1594	1834	2073	2309	2494

- **PDA-184 time (min:sec): 41:34**
- ✓ **VMail Enhanced time (min:sec): 24:01**
 - ✓ 58% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 32:12**
 - ✓ 77% of PDA-184!

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Test configurations and parameters	
Radio - Harris Falcon III AN/PRC-152	
LOS 16Kbps, FM, Low Power, Attenuation 120dBm	
Computer: Gateway Intel T2400, 1.83GHz, 1GB RAM	
Radio PRESET KY57 FEC =3/4 Adaptive = YES, Probe = NO, ARQ = YES Compression = YES	
PDA-184 v4.9.3 (06/01/07) Outlook Express 6	Vmail 2.1.0 (06/2007)
Sea Level PCMCIA 3612	VDC-600 5.2.01 08-01-06
Max Packet = 256	Max Packet = 256 for Legacy 1024 for Enhanced

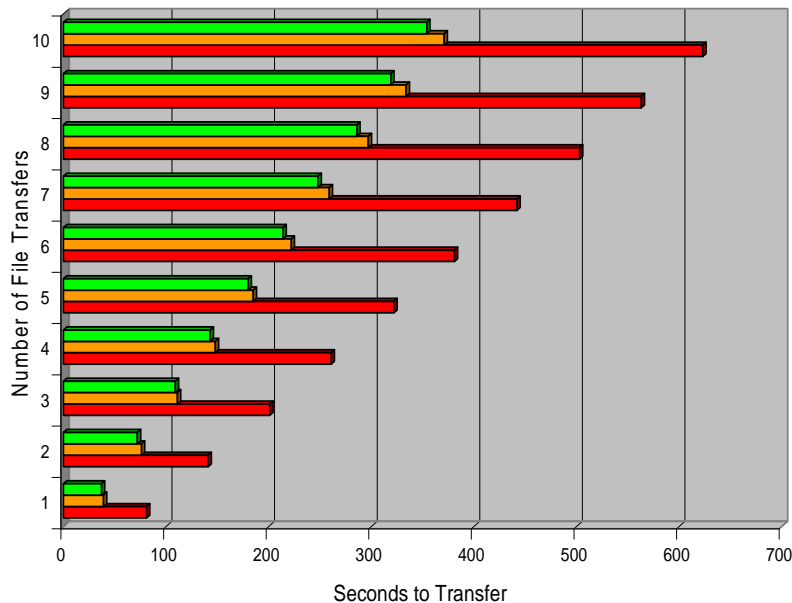
Transfer Time Comparison		
# emails	Enhanced vs. PDA	Legacy vs. PDA
1	59%	72%
2	58%	81%
3	59%	80%
4	55%	75%
5	53%	72%
6	54%	73%
7	55%	74%
8	55%	75%
9	56%	75%
10	58%	77%

VMAIL/VDC-600 .vs. PDA-184

LOS 16Kbps – 10 emails with 100kB text attachment



Email with 100kB text attachment



	1	2	3	4	5	6	7	8	9	10
Vmail (Enhanced)	37	72	109	143	180	214	248	286	319	354
Vmail (Legacy)	39	76	111	148	185	222	259	297	334	371
PDA-184	81	141	201	261	322	381	442	503	563	623

- **PDA-184 time (min:sec): 10:23**
- ✓ **VMail Enhanced time (min:sec): 05:54**
 - ✓ 57% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 06:11**
 - ✓ 60% of PDA-184!

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Test configurations and parameters

Radio - Harris Falcon III AN/PRC-152

LOS 16Kbps, Low Power, FM, Whip Antenna

Computer LEVENO T61 Laptop

Device KY57 – All Delay Timer = 0

FEC =1 Adaptive = NO

Probe = NO, ARQ = YES

Compression = YES

PDA-184 v4.9.3 (06/01/07)
Outlook Express 6

Vmail 2.1.0 (06/2007)

Sea Level PCMCIA 3612

VDC-600 5.2.01 08-01-06

Max Packet = 256

Max Packet = 256 for Legacy,
1024 for Enhanced

Transfer Time Comparison

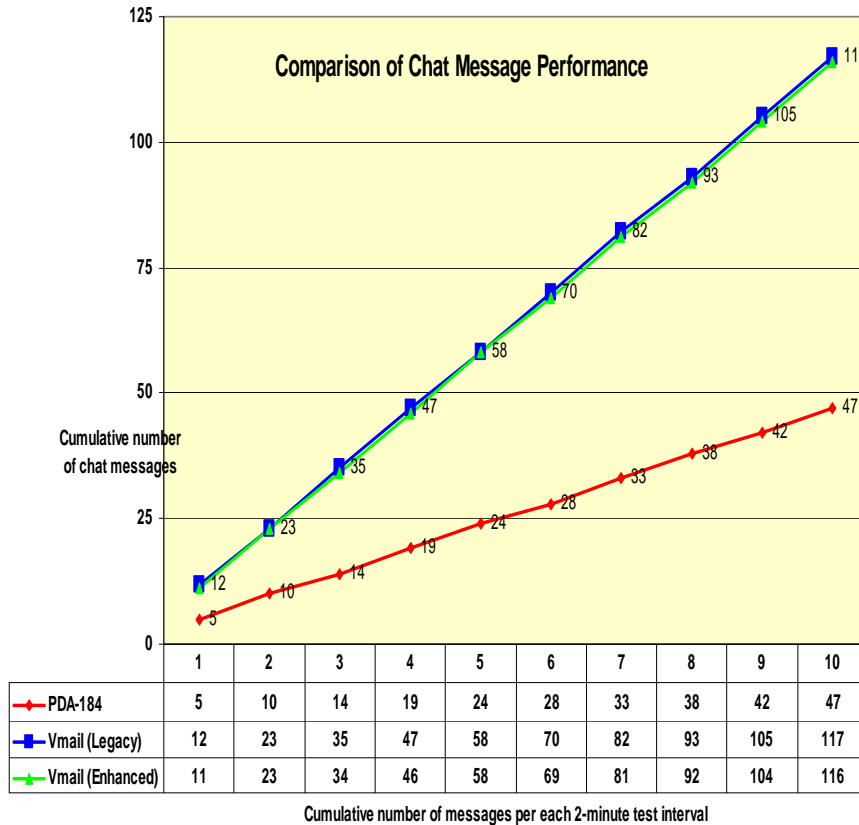
# emails	Enhanced vs. PDA	Legacy vs. PDA
1	46%	48%
2	51%	54%
3	54%	55%
4	55%	55%
5	56%	57%
6	56%	58%
7	56%	59%
8	57%	59%
9	57%	59%
10	57%	60%

- **The following test procedures were used to compare the performance in using Chat Function:**
 - Radios networked with coaxial cable and proper attenuation to ensure error free data transfers.
 - Local Address Books, configured for Point to Point data transfer.
 - Start the timer.
 - From the transmitting station, type and send a short message: "Question 1".
 - When the Question appears on the Notes Panel of the receiving station, type and send a short response: "Answer 1".
 - When the Answer appears on the Notes Panel of the transmitting station, type and send a new question: "Question 2".
 - Record the number of messages being sent every 2-minute interval.
 - Capture the data for 20 minutes.

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VMAIL/VDC-600 .vs. PDA-184

LOS 16Kbps – Comparison of Chat Performance



Test configurations and parameters	
Radio - Harris Falcon III AN/PRC-152	
LOS 16Kbps, FM, Attenuation 120dBm	
Computer: Gateway Intel T2400, 1.83GHz, 1GB RAM	
Radio PRESET KY57 FEC = 3/4 Adaptive = YES, Probe = NO, ARQ = YES Compression = YES	
PDA-184 v4.9.3 (06/01/07)	Vmail 2.1.0 (06/2007)
Sea Level PCMCIA 3612	VDC-600 5.2.01 08-01-06
Max Packet = 256	Max Packet = 256 for Legacy, 1024 for Enhanced

Performance Comparison - % More messages		
Minutes	Enhanced vs. PDA	Legacy vs. PDA
2	120%	140%
4	130%	130%
6	143%	150%
8	142%	147%
10	142%	142%
12	146%	150%
14	145%	148%
16	142%	145%
18	147%	150%
20	148%	149%

- **PDA-184 # of chat messages in 20 minutes: 47**
- ✓ **VMail Enhanced # in 20 minutes: 116**
- ✓ **VMail Legacy # in 20 minutes: 117**

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VMail .vs. PDA-184

Multiple Files Transfer 25kHz DAMA at 2400bps



- **This test is to compare the performance in sending 10 text documents or image files continuously on 25kHz DAMA channel at 2400bps. The following test procedures were used to conduct the test:**
 - Use ViaSat DOCTT/S Test System to simulate operation of 25kHz DAMA channel. Set data rate to 2400bps.
 - Local Address Books, configured for Point to Point data transfer.
 - Prepare 10 copies of the file being transferred from the transmitting station.
 - From the Queue Control Panel of the transmitting station, set the queue to Locked state.
 - Load the transmit queue with 10 files to be sent.
 - Change the state of the transmitting queue to Unlocked state and start the timer immediately.
 - Monitor the progress of each file transfer. Capture the time when the transmitting station receives the final burst acknowledgement.
 - Record the time for each file transfer.

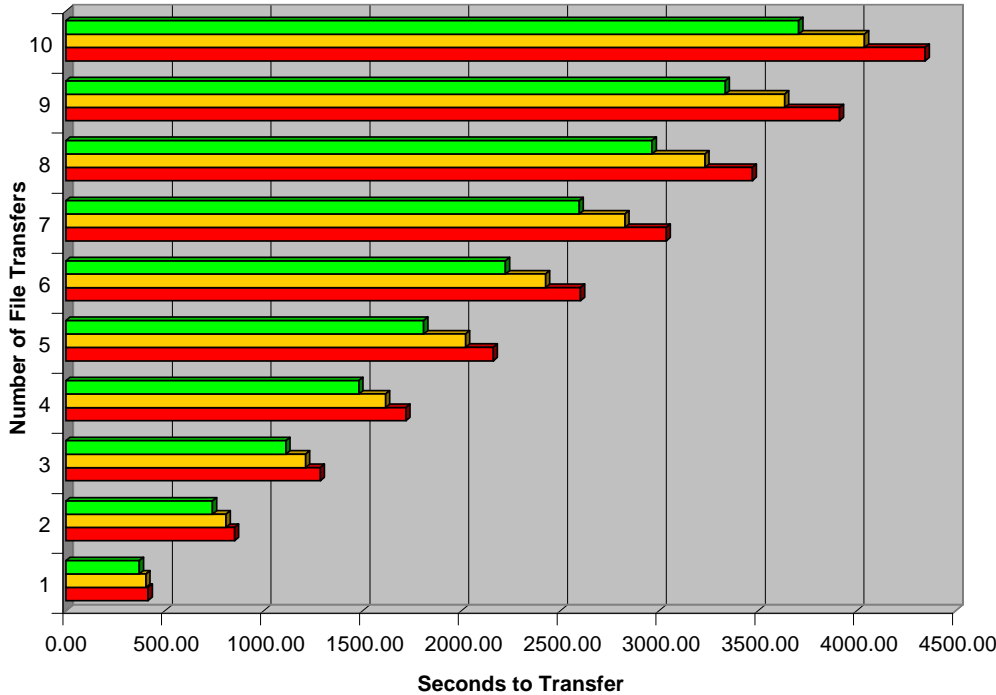
[Return](#)

VMAIL/VDC-600 .vs. PDA-184

25kHz DAMA 2400bps – 10 Files Winter.jpg (104kB)



25kHz DAMA 2400bps - 10 Transfers - Winter.jpg (104kB)



	1	2	3	4	5	6	7	8	9	10
Vmail (Enhanced)	371.65	740.11	1112.28	1482.39	1809.50	2222.95	2595.96	2964.75	3334.98	3706.65
Vmail (Legacy)	404.32	809.18	1212.75	1616.26	2021.14	2426.11	2828.09	3231.57	3634.04	4038.81
PDA-184	415.20	853.57	1285.90	1720.09	2161.21	2602.18	3035.99	3471.81	3913.20	4345.67

- **PDA-184 time (min:sec): 72:26**
- ✓ **VMail Enhanced time (min:sec): 61:47**
 - ✓ 85% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 67:19**
 - ✓ 93% of PDA-184!

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Test configurations and parameters

Radio PRC-117F - 25Khz DAMA 2400bps
 KG-84 Mode 1 Encryption
 MS 181-183A – DEQPSK Modulation

PDA-184 v4.9.3
(06/01/07)

Vmail 2.1.0
(06/2007)

Sea Level PCMCIA
3612

VDC-600 5.2.02
12-12-07

Max Packet = 256

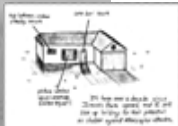
Max Packet = 256 for
Legacy 1024
for Enhanced

Transfer Time Comparison

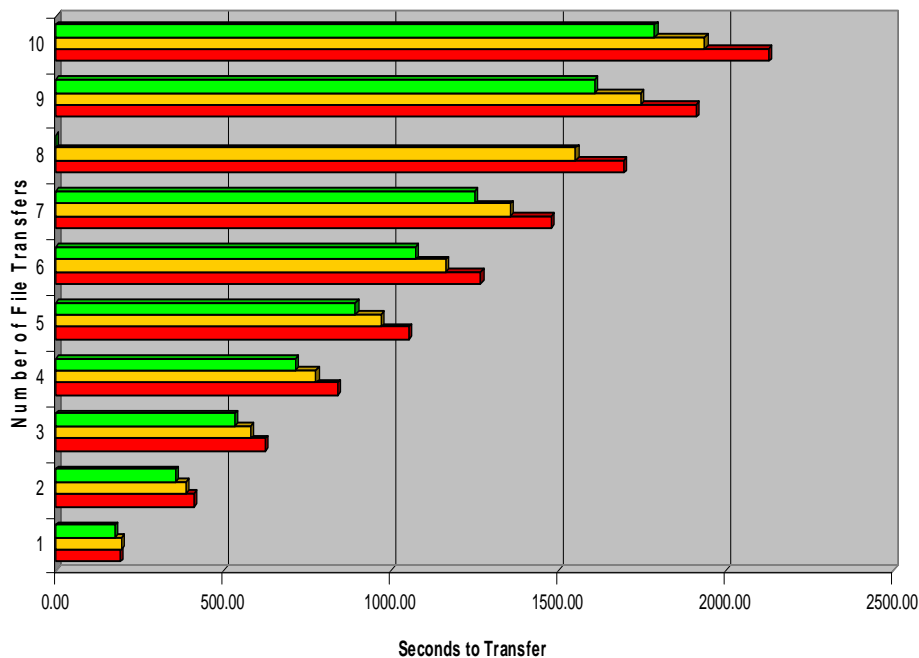
# Files	Enhanced vs. PDA-184	Legacy vs. PDA-184
1	90%	97%
2	87%	95%
3	86%	94%
4	86%	94%
5	84%	94%
6	85%	93%
7	85%	93%
8	85%	93%
9	85%	93%
10	85%	93%

VMAIL/VDC-600 .vs. PDA-184

25kHz DAMA 2400bps – 10 Files – Velociraptors.jpg (49kB)



25kHz DAMA at 2400bps - 10 Transfers - velociraptors.jpg (49kB)



	1	2	3	4	5	6	7	8	9	10
Vmail (Enhanced)	177.15	356.18	534.18	715.35	894.12	1073.07	1250.43	0.00	1608.31	1787.10
Vmail (Legacy)	194.62	388.82	581.57	775.59	971.09	1163.75	1356.71	1551.10	1744.37	1936.31
PDA-184	193.19	410.85	623.82	839.35	1053.56	1268.06	1479.67	1694.21	1911.60	2126.26

- **PDA-184 time (min:sec): 35:26**
- ✓ **VMail Enhanced time (min:sec): 29:47**
 - ✓ 84% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 32:17**
 - ✓ 91% of PDA-184!

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Test configurations and parameters

Radio PRC-117F - 2400bps 25Khz DAMA
 KG-84 Mode 1 Encryption
 MS 181-183A – DEQPSK Modulation

PDA-184 v4.9.3
 (06/01/07)

Vmail 2.1.0
 (06/2007)

Sea Level PCMCIA
 3612

VDC-600 5.2.02
 12-12-07

Max Packet = 256

Max Packet = 256
 Legacy, 1024
 Enhanced

Transfer Time Comparison

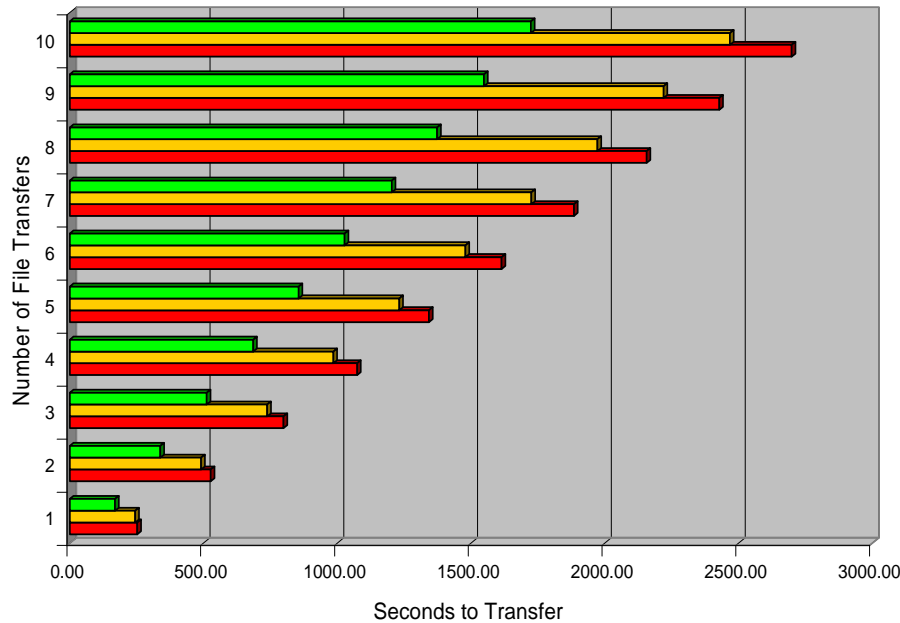
# Files	Enhanced vs. PDA-184	Legacy vs. PDA-184
1	92%	101%
2	87%	95%
3	86%	93%
4	85%	92%
5	85%	92%
6	85%	92%
7	85%	92%
8	84%	92%
9	84%	91%
10	84%	91%

VMAIL/VDC-600 .vs. PDA-184

25kHz DAMA at 2400bps – 10 Text Files (100kB)



25kHz DAMA at 2400bps - 10 Transfers - 100kB Text



	1	2	3	4	5	6	7	8	9	10
Vmail (Enhanced)	169.43	338.18	512.11	685.43	855.34	1027.54	1203.48	1373.40	1548.62	1723.62
Vmail (Legacy)	244.68	490.98	738.31	985.11	1231.90	1479.06	1725.62	1972.44	2219.67	2467.40
PDA-184	252.03	526.76	799.13	1074.10	1342.65	1614.31	1884.90	2156.57	2427.85	2698.50

- **PDA-184 Time (minutes: seconds): 44:59**
- ✓ **VMail Enhanced time (min:sec): 28:44**
 - ✓ 64% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 41:07**
 - ✓ 91% of PDA-184!

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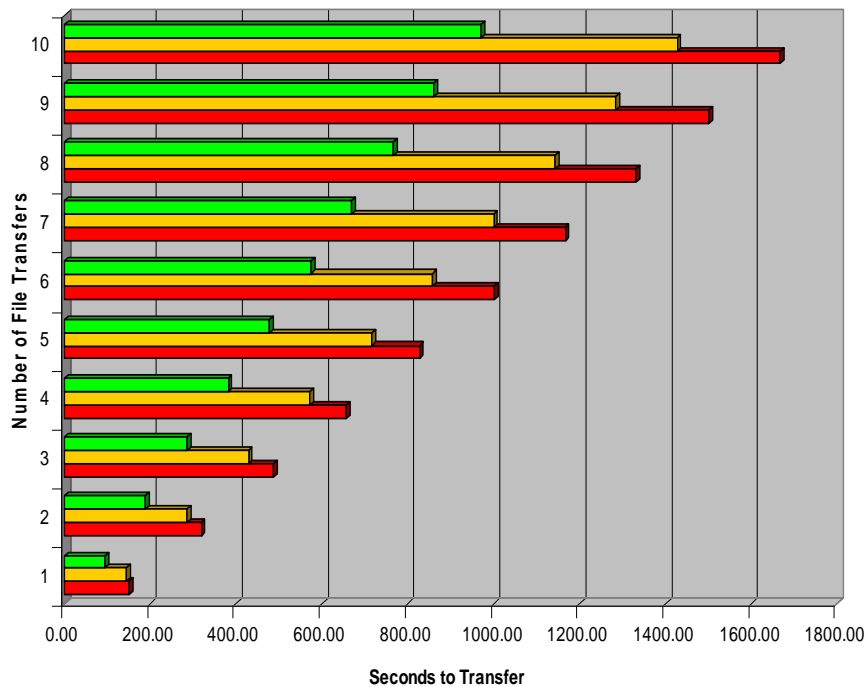
Test configurations and parameters	
Radio PRC-117F - 25Khz DAMA 2400bps KG-84 Mode 1 Encryption MS 181-183A – DEQPSK Modulation	
PDA-184 v4.9.3 (06/01/07)	Vmail 2.1.0 (06/2007)
Sea Level PCMCIA 3612	VDC-600 5.2.02 12-12-07
Max Packet = 256	Max Packet = 256 for Legacy 1024 for Enhanced

Transfer Time Comparison		
# Files	Enhanced vs. PDA-184	Legacy vs. PDA-184
1	67%	97%
2	64%	93%
3	64%	92%
4	64%	92%
5	64%	92%
6	64%	92%
7	64%	92%
8	64%	91%
9	64%	91%
10	64%	91%

VMAIL/VDC-600 .vs. PDA-184

25kHz DAMA at 2400bps – 10 Text Files (50kB)

DAMA 25kHz at 2400bps - 10 Transfers - 50kB Text



	1	2	3	4	5	6	7	8	9	10
■ Vmail (Enhanced)	94.20	189.04	285.93	382.38	478.76	574.50	670.30	767.29	860.00	970.04
■ Vmail (Legacy)	144.75	286.21	429.32	573.20	715.48	857.32	1000.70	1143.07	1284.40	1427.48
■ PDA-184	151.26	319.79	486.54	656.35	827.78	1000.95	1166.75	1332.18	1501.23	1667.62

- **PDA-184 Time (minutes: seconds): 27:48**
- ✓ **VMail Enhanced time (min:sec): 16:10**
 - ✓ 58% of PDA-184!
- ✓ **VMail Legacy time (min:sec): 23:48**
 - ✓ 86% of PDA-184!

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Test configurations and parameters	
Radio 117F - 2400bps 25Khz DAMA KG-84 Mode 1 Encryption MS 181-183A – DEQPSK Modulation	
PDA-184 v4.9.3 (06/01/07)	Vmail 2.1.0 (06/2007)
Sea Level PCMCIA 3612	VDC-600 5.2.02 12- 12-07
Max Packet = 256	Max Packet = 256 for Legacy 1024 for Enhanced

Transfer Time Comparison		
# Files	Enhanced vs. PDA-184	Legacy vs. PDA-184
1	62%	96%
2	59%	89%
3	59%	88%
4	58%	87%
5	58%	86%
6	57%	86%
7	57%	86%
8	58%	86%
9	57%	86%
10	58%	86%