Approved by OMB 3060–0678

Date & Time Filed: Nov 16 2006 7:05:01:393PM File Number: SES-MFS-20061116-02027

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD – MAIN FORM	FCC Use Only
FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu: Modification of Mobile Earth Station License

1–8. Legal Name of App	plicant		
Name:	COMTECH MOBILE DATACOM CORP.	Phone Number:	240-686-3300
DBA Name:		Fax Number:	240-686-3301
Street:	20430 Century Boulevard	E-Mail:	John.Fossaceca@comtechmobile. com
City:	Germantown	State:	MD
Country:	USA	Zipcode:	20874 –
Attention:	John Fossaceca		

Name:	Joan M. Griffin	Phone Number:	202-342-8573
Company:	Kelley Drye & Warren LLP	Fax Number:	202-342-8451
Street:	3050 K Street, N.W.	E-Mail:	jgriffin@kelleydrye.com
	Suite 400		
City:	Washington	State:	DC
Country:	USA	Zipcode:	20007-
Attention:		Relationship:	Legal Counsel

17. Choose the button next to the	
classification that applies to this filing for	(N/A) b1. Application for License of New Station
both questions a. and b. Choose only one	(N/A) b2. Application for Registration of New Domestic Receive–Only Station
for 17a and only one for 17b.	• b3. Amendment to a Pending Application
a1. Earth Station	● b4. Modification of License or Registration
	b5. Assignment of License or Registration
• a2. Space Station	b6. Transfer of Control of License or Registration
	• b7. Notification of Minor Modification
	(N/A) b8. Application for License of New Receive–Only Station Using Non–U.S. Licensed Satellite
	(N/A) b9. Letter of Intent to Use Non–U.S. Licensed Satellite to Provide Service in the United
	States
	(N/A) b10. Other (Please specify)
	(N/A) b11. Application for Earth Station to Access a Non–U.S.satellite Not Currently Authorized
	to Provide the Proposed Service in the Proposed Frequencies in the United States
	(N/A) b12. Application for Database Entry
	b13. Amendment to a Pending Database Entry Application
	• b14. Modification of Database Entry

17c. Is a fee submitted with this applicat		
● If Yes, complete and attach FCC Form	159. If No, indicate reason for fee exemptio	n (see 47 C.F.R.Section 1.1114).
O Governmental Entity O Noncomm	ercial educational licensee	
• Other(please explain):		
17d.		
Fee Classification CGB – Mobile Satellite	e Earth Stations	
18. If this filing is in reference to an existing station, enter:	19. If this filing is an amendment to a pendir modification please enter only the file numb	ng application enter both fields, if this filing is a er:
(a) Call sign of station: E990143	(a) Date pending application was filed:	(b) File number:
		SESLIC1999021600488

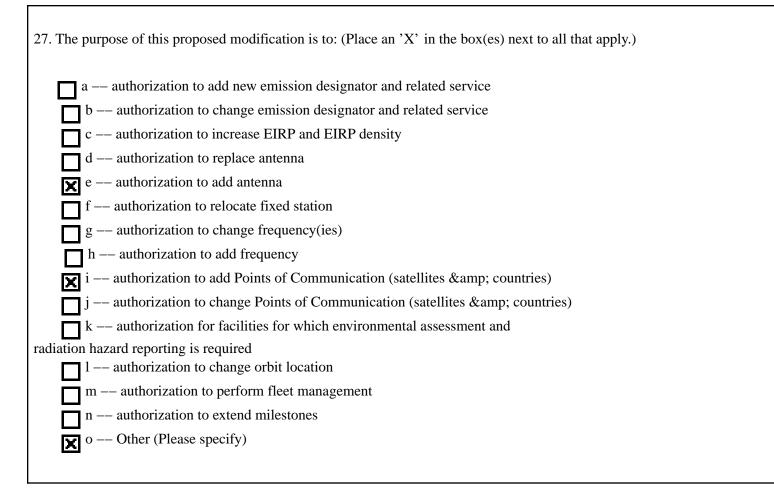
TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provid	e or use the following type(s) of service(s): Select all that apply:
a. Fixed Satellite	
b. Mobile Satellite	
c. Radiodetermination Satellite	
d. Earth Exploration Satellite	
e. Direct to Home Fixed Satellite	
f. Digital Audio Radio Service	
g. Other (please specify)	
21. STATUS: Choose the button next to the applicable status. Choose	22. If earth station applicant, check all that apply.
only one.	Using U.S. licensed satellites
○ Common Carrier	Using Non–U.S. licensed satellites
23 If applicant is providing INTERNATIONAL COMMON CAPPIER	service, see instructions regarding Sec. 214 filings. Choose one. Are these
facilities:	service, see instructions regarding Sec. 214 mings. Choose one. Are mese
• Connected to a Public Switched Network • Not connected to a	Public Switched Network 👩 N/A
24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all a	applicable frequency band(s).
a. C–Band (4/6 GHz) b. Ku–Band (12/14 GHz)	
c.Other (Please specify upper and lower frequencies in MHz.)	
Frequency Lower: 1525.0 Frequency Upper: 1660.5	(Please specify additional frequencies in an attachment)

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.
• a. Fixed Earth Station
• b. Temporary–Fixed Earth Station
o c. 12/14 GHz VSAT Network
O d. Mobile Earth Station
• e. Geostationary Space Station
• f. Non–Geostationary Space Station
• g. Other (please specify)
26. TYPE OF EARTH STATION FACILITY:
Transmit/Receive Transmit–Only Receive–Only N/A
"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION



ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.	-	Yes Appl	-		xhib	vits	
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aerona aeronautical fixed radio station services are not required to respond to Items 30–34.	autic	al en	rou	te or	•		
29. Is the applicant a foreign government or the representative of any foreign government?	0	Yes	۲	No			
30. Is the applicant an alien or the representative of an alien?	0	Yes	۲	No	0	N/A	1
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	۲	No	0	N/A	<u> </u>
32. Is the applicant a corporation of which more than one–fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	0	Yes	۲	No	0	N/A	L

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.

BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.	Yes	O No
36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explination of circumstances.	O Yes	● No

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explination of circumstances.	O Yes	● No
38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances	O Yes	● No
39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhinit, an explanation of the circumstances.	• Yes	O No
40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.		

41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti–Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.

42a. Does the applicant intend to use a non–U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.



O No

Yes

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station? Canada and the United States.

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

See Exhibit D, attached.

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

Individual

O Unincorporated Association

- Partnership
- Corporation

Governmental Entity

Other (please specify)

45. Name of Person Signing	46. Title of Person Signing
John Fossaceca	Vice President, Engineering
John Tossaccea	vice i resident, Engineering

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WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

SATELLITE EARTH STATION AUTHORIZATIONS FCC Form 312 – Schedule B:(Technical and Operational Description) FOR OFFICIAL USE ONLY

Location of Earth Stati	tion Site			
E1: Site Identifier: N	N/A	E5. Call Sign:	E990143	
E2: Contact Name Jo	John Fossaceca	E6. Phone Number:	240-686-3300	
E3. Street:		E7. City:		
		E8. County:		
E4. State		E9. Zip Code		
E10. Area of Operatio	on:	Continental U.S., A	laska, Hawaii	
E11. Latitude: 0	0.0° 0° 0			
E12. Longitude: 0	" 0.0 [°] 0° 0			
E13. Lat/Lon Coordin	nates are:	ONAD-27	O NAD-83	• N/A
E14. Site Elevation (A	AMSL):	0.0 meters		

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two–degree spacing policy.	O ^{Yes}	O ^{No}	● ^{N/A}
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E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non–geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	O Yes	O ^{No}	N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	• Yes	0	No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	0	Yes	۲	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	0	Yes	۲	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	0	Yes	۲	No

POINTS OF COMMUNICATION

Satellite Name: MSAT-1 MSAT-1 106.5 W.L.	If you selected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name: MSAT-1 | MSAT-1 | 106.5 W.L. If you selected OTHER, please enter the following:

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

Satellite Name: AMSC 1 AMSC 1 101 W.L. If you selected OTHER	, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
POINTS OF COMMUNICATION (Destination Points)	
E25. Site Identifier:	
E26. Common Name:	E27. Country:

ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi at GHz)
N/A	A1/INT	0	SCI Systems, Inc.	MT–2010 Internal	0.15	2.9 dBi at 1.545
N/A	A1/INT	0	SCI Systems, Inc.	MT–2010 Internal	0.15	2.9 dBi at 1.645
N/A	A2/EXT	0	Sensor Systems	S65-8282-101	0.15	4.3 dBi at 1.545
N/A	A2/EXT	0	Sensor Systems	S65-8282-101	0.15	4.8 dBi at 1.645
N/A	A3/EXT	0	SCI Systems, Inc.	MT–2010 External	0.06	4.0 dBi at 1.545

N/A	A3/EXT	0	SCI Systems, Inc.	MT–2010 External	0.06	4.0 dBi at 1.645	
N/A	A4/INT	0	SCI Systems, Inc.	MT–2010 r1 Internal	0.15	5.0 dBi at 1.545	
N/A	A4/INT	0	SCI Systems, Inc.	MT–2010 r1 Internal	0.15	5.0 dBi at 1.645	
N/A	A5/EXT	0	Sensor Systems	\$65-8282-301	0.27	3.5 dBi at 1.545	
N/A	A5/EXT	0	Sensor Systems	\$65-8282-301	0.27	3.9 dBi at 1.645	
N/A	A6/INT	0	PCTEL	3481IZ-3	0.18	3.7 dBi at 1.545	
N/A	A6/INT	0	PCTEL	3481IZ-3	0.18	3.7 dBi at 1.645	
N/A	A7/INT	0	PCTEL	3491IZ-3	0.18	6.0 dBi at 1.545	
N/A	A7/INT	0	PCTEL	3491IZ-3	0.18	6.0 dBi at 1.645	
N/A	A8/EXT	0	PCTEL	3561AW-1/A	0.19	3.7 dBi at 1.545	
N/A	A8/EXT	0	PCTEL	3561AW-1/A	0.19	3.7 dBi at 1.645	

Id	Diameter		· · · ·	Height Above	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
A1/INT	0.0/0.0	0.0	0.0	0.0	5.3	0.0	10.2

A2/EXT	0.0/0.0	0.0	0.0	0.0	5.3	0.0	12.1
A3/EXT	0.0/0.0	0.0	0.0	0.0	5.3	0.0	11.3
A4/INT	0.0/0.0	0.0	0.0	0.0	5.3	0.0	12.3
A5/EXT	0.0/0.0	0.0	0.0	0.0	5.3	0.0	11.2
A6/INT	0.0/0.0	0.0	0.0	0.0	5.3	0.0	11.0
A7/INT	0.0/0.0	0.0	0.0	0.0	5.3	0.0	13.3
A8/EXT	0.0/0.0	0.0	0.0	0.0	5.3	0.0	11.0

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode		Designator	EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
A1/INT	1525.0 1559.0	R	Right Hand Circular	168KG1D	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DSSS, BPSK, 84,375 CPS, DATA

A1/INT	1626.5 1660.5	Right Hand Circular	168KG1D	10.2	4.4

E50. Modulati entirety.)	on and Services	(If the complete de	escription does not appea	r in this box, please	go to the end of	he form to view it in i	its
DSSS, BP	SK, 84,375 CP	S, DATA					
A2/EXT	1525.0 1559.0	R	Right Hand Circular	168KG1D	0.0	0.0	
E50. Modulati entirety.)	on and Services	(If the complete d	escription does not appea	r in this box, please	go to the end of	he form to view it in i	its
DSSS, BP	SK, 84,375 CP	S, DATA					
A2/EXT	1626.5 1660.5	Т	Right Hand Circular	168KG1D	12.1	6.3	
E50. Modulati entirety.)	on and Services	(If the complete d	escription does not appea	r in this box, please	go to the end of	he form to view it in i	its
DSSS, BP	SK, 84,375 CP	S, DATA					
A3/EXT	1525.0 1559.0	R	Right Hand Circular	168KG1D	0.0	0.0	

E50. Modulation entirety.)	and Services (If the services of the services	ne complete descripti	on does not appear in	this box, please go to	o the end of the form	to view it in its
DSSS, BPSK	C, 84,375 CPS,	DATA				
A3/EXT	1626.5 1660.5	Т	Right Hand Circular	168KG1D	11.3	5.5
E50. Modulation entirety.)	and Services (If the service s	ne complete descripti	on does not appear in	this box, please go to	o the end of the form	to view it in its
DSSS, BPSK	, 84,375 CPS,	DATA				
A4/INT	1525.0 1559.0	R	Right Hand Circular	168KG1D	0.0	0.0
E50. Modulation entirety.)	and Services (If the service s	ne complete descripti	on does not appear in	this box, please go to	o the end of the form	to view it in its
DSSS, BPSK	2, 84,375 CPS,	DATA				
A4/INT	1626.5 1660.5	Т	Right Hand Circular	168KG1D	12.3	6.5

E50. Modulatio entirety.)	n and Services (If the complete d	escription does not appear	in this box, please	go to the end of t	he form to view it in its	3
DSSS, BPS	K, 84,375 CP	S, DATA					
A5/EXT	1525.0 1559.0	R	Right Hand Circular	168KG1D	0.0	0.0	
E50. Modulatio entirety.)	n and Services (If the complete d	escription does not appear	in this box, please	go to the end of t	he form to view it in its	3
DSSS, BPS	K, 84,375 CP	S, DATA					
A5/EXT	1626.5 1660.5	Т	Right Hand Circular	168KG1D	11.2	5.4	
E50. Modulatio entirety.)	n and Services (If the complete d	escription does not appear	in this box, please	go to the end of t	he form to view it in its	3
DSSS, BPS	K, 84,375 CP	S, DATA					
A6/INT	1525.0 1559.0	R	Right Hand Circular	168KG1D	0.0	0.0	

E50. Modulation entirety.)	n and Services (If t	he complete descripti	on does not appear in	this box, please go to	o the end of the form	to view it in its
	K, 84,375 CPS,	DATA				
A6/INT	1626.5 1660.5	Т	Right Hand Circular	168KG1D	11.0	5.2
E50. Modulation entirety.)	n and Services (If t	he complete descripti	on does not appear in	this box, please go t	o the end of the form	to view it in its
DSSS, BPSI	K, 84,375 CPS,	DATA				
A7/INT	1525.0 1559.0	R	Right Hand Circular	168KG1D	0.0	0.0
E50. Modulation entirety.)	n and Services (If t	he complete descripti	on does not appear in	this box, please go to	o the end of the form	to view it in its
DSSS, BPSI	K, 84,375 CPS,	DATA				
A7/INT	1626.5 1660.5	Т	Right Hand Circular	168KG1D	13.3	7.5

E50. Modulati entirety.)	on and Services	(If the complete de	escription does not appea	r in this box, please	go to the end of the	he form to view it in its
DSSS, BP	SK, 84,375 CE	PS, DATA				
A8/EXT	1525.0 1559.0	R	Right Hand Circular	168KG1D	0.0	0.0
entirety.) DSSS, BP	SK, 84,375 CE	PS, DATA				
A8/EXT	1626.5 1660.5	Т	Right Hand Circular	168KG1D	11.0	5.2
entirety.)	SK, 84,375 CE		escription does not appea	r in this box, please	go to the end of the	he form to view it in its

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
A1/INT	Geostationary	1525.0 1559.0	101.0/106.5	0.0	0.0	0.0	0.0	0.0
	Geostationary	1626.5 1660.5	101.0/106.5	0.0	0.0	0.0	0.0	-1.0
A2/EXT	Geostationary	1525.0 1559.0	101.0/106.5	0.0	0.0	0.0	0.0	0.0
	Geostationary	1626.5 1660.5	101.0/106.5	0.0	0.0	0.0	0.0	-5.0
A3/EXT	Geostationary	1525.0 1559.0	101.0/106.5	0.0	0.0	0.0	0.0	0.0
	Geostationary	1626.5 1660.5	101.0/106.5	0.0	0.0	0.0	0.0	-1.0
A4/INT	Geostationary	1525.0 1559.0	101.0/106.5	0.0	0.0	0.0	0.0	0.0
	Geostationary	1626.5 1660.5	101.0/106.5	0.0	0.0	0.0	0.0	-1.0
A5/EXT	Geostationary	1525.0 1559.0	101.0/106.5	0.0	0.0	0.0	0.0	0.0
	Geostationary	1626.5 1660.5	101.0/106.5	0.0	0.0	0.0	0.0	-5.9
A6/INT	Geostationary	1525.0 1559.0	101.0/106.5	0.0	0.0	0.0	0.0	0.0

	Geostationary	1626.5 1660.5	101.0/106.5	0.0	0.0	0.0	0.0	-1.0
A7/INT	Geostationary	1525.0 1559.0	101.0/106.5	0.0	0.0	0.0	0.0	0.0
	Geostationary	1626.5 1660.5	101.0/106.5	0.0	0.0	0.0	0.0	-3.5
A8/EXT	Geostationary	1525.0 1559.0	101.0/106.5	0.0	0.0	0.0	0.0	0.0
	Geostationary	1626.5 1660.5	101.0/106.5	0.0	0.0	0.0	0.0	-1.0
REMOTE	CONTROL POIN	T LOCATIO	N					
	l Sign Please enter the calls which this applicati			ot the	E66. Phone Nu 240–686–3389			
	eet Address entury Blvd.							
E63. City Germant			E68. Count Montgome	•		E67/6 State/Cou MD/		E64. Zip Code 20874

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