



# **VTEC Primer**

**Your Guide to Interpreting  
VTEC**

# Outline

- **Why VTEC?**
- **Impact on Operations**
- **What Products?**
- **The Code**
- **Reading VTEC in a product**

# Why VTEC?

- Customers needed an easy-to-decode, uniform way to receive Watch/Warning/Advisory (W/W/A) information
- Allows start to finish tracking of W/W/As
- Allows for quicker dissemination of W/W/A information in conjunction with UGC header
- Helps to standardize our products for both internal and external use (webpages, TV crawls)

# Impact on Operations

- VTEC is generated automatically by NWS software
- Mandates use of VTEC-generating software
  - WarnGen for Feb. 8 products
- Necessitates a strict adherence to NWS policy
  - Mandatory ways to correct inadvertent mistakes
  - Headline standardization
- Especially critical with delay to long-fused products

# Initial VTEC Products

**Initial Implementation on February 8, 2005**

- **All non-hydrologic convective warnings and follow-up statements**
  - Tornado Warnings (TOR)
  - Severe Thunderstorm Warnings (SVR)
  - Special Marine Warnings (SMW)
  - Severe Weather Statements (SVS)
  - Marine Weather Statements (MWS)
    - Only as SMW follow-up
- **SPC Products**
  - Watch Outline Update (WOU)
    - Only initial and final issuances

# Eventual VTEC Products

- Watch County Notification (WCN)
- Intermediate Watch Outline Updates (WOU)
- All winter weather watches, warnings and advisories (WSW)
- All non-precip watches, warnings and advisories (NPW)
- Coastal and Lakeshore Flood watches, warnings and statements and High Surf advisories (CFW)
- Fire weather watches and Red flag warnings (RFW)
- All Hydrologic Products
  - FFW, FFS, FFA, FLW, FLS
- Routine Marine Products (CWF, NSH, GLF, OFF)
- NCEP Tropical Hazard Products

# Definition of a VTEC Event

- An event is a specific combination of phenomenon (e.g., Heavy Snow, Tornado, Wind) and level of significance (e.g., Watch, Warning, or Advisory).
- Common examples of events include:

	Phenomenon	Level of Significance	
Heavy Snow Warning	HS	W	
Winter Storm Warning	WS	W	
Tornado Watch	TO	A	
Wind Advisory	WI	Y	
- Each event given an Event Tracking Number (ETN), a four-digit number which stays with the event through its lifetime - from first issuance until upgrade, downgrade, cancellation or expiration.



# VTEC Explained

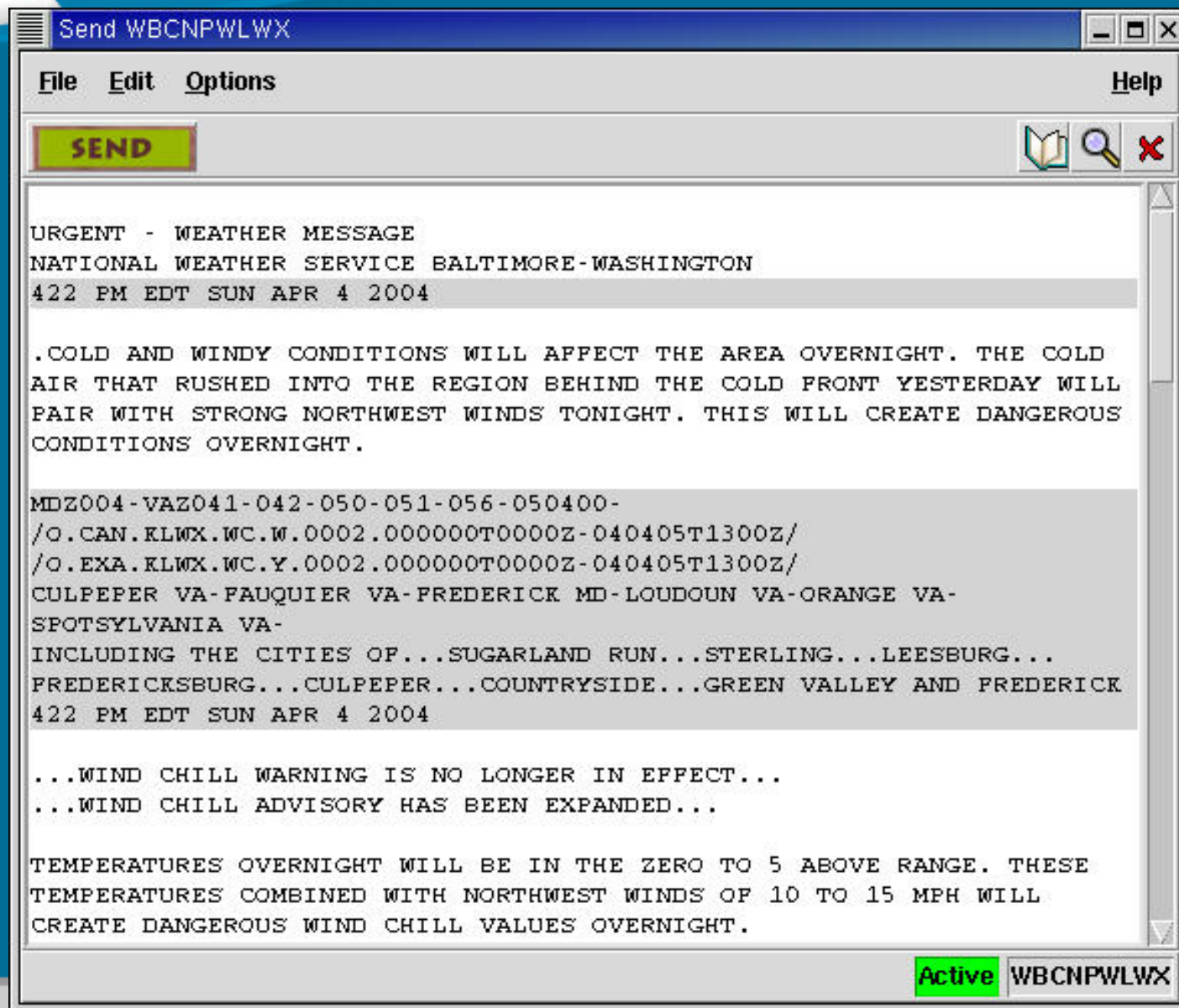
**P-VTEC String:** /k.aaa.cccc.pp.s.####.ymmddThhnnZ<sub>B</sub>-ymmddThhnnZ<sub>E</sub>/

P-VTEC String	Event Group		Date/Time Group	
	k - Product Class		ymmddThhnnZ <sub>B</sub> - Event Beginning Date/Time	
	aaa - Action		ymmddThhnnZ <sub>E</sub> - Event Ending Date/Time	
	cccc - Office ID		yy - year	hh - hour
	pp - Phenomena		mm - month	nn - minute
	s - Significance		dd - day	Z - fixed UTC indicator
	#### - Event Tracking Number (ETN)		T - fixed time indicator	

Product (k) class	O	Operational product	E	Experimental product	Phenomena (pp)	BZ	Blizzard	WI	Wind	AV	Avalanche
	T	Test product	X	Experimental VTEC in Operational product		WS	Winter Storm	HW	High Wind	TS	Tsunami
						WW	Winter Weather	LV	Lake Wind	MA	Marine
						SN	Snow	FG	Dense Fog	SC	Small Craft
Actions (aaa)	NEW	New event	UPG	Event upgraded		HS	Heavy Snow	SM	Dense Smoke	GL	Gale
	CON	Event continued	CAN	Event cancelled		LE	Lake Effect Snow	HT	Heat	SR	Storm
	EXT	Event extended (time)	EXP	Event expiring		LB	Lake Effect Snow & Blowing Snow	EH	Excessive Heat	HF	Hurricane Force Wind
	EXA	Event extended (area)	COR	Correction		BS	Blowing/Drifting Snow	DU	Blowing Dust	TR	Tropical Storm
	EXB	Event extended (both time and area)	ROU	Routine		SB	Snow & Blowing Snow	DS	Dust Storm	HU	Hurricane
						IP	Sleet	FL	Flood	TY	Typhoon
						HP	Heavy Sleet	FF	Flash Flood	TI	Inland Tropical Storm Wind
Significance (s)	W	Warning	Y	Advisory		ZR	Freezing Rain	SV	Severe Thunderstorm	HI	Inland Hurricane Wind
	A	Watch	S	Statement		IS	Ice Storm	TO	Tornado	LS	Lakeshore Flood
						FZ	Freeze	FW	Fire Weather (RFW, FWW)	CF	Coastal Flood
						ZF	Freezing Fog	RH	Radiological Hazard	UP	Ice Accretion
						FR	Frost	VO	Volcano	LO	Low Water
						WC	Wind Chill	AF	Volcanic Ashfall	SU	High Surf
						EC	Extreme Cold	AS	Air Stagnation		



# VTEC Examples



# New Hazard

```
MAZ001-NYZ058>061-190117-  
/O.NEW.KALY.WW.Y.0023.040519T1600Z-040520T0300Z/  
EASTERN COLUMBIA NY-EASTERN GREENE NY-NORTHERN BERKSHIRE MA-  
WESTERN COLUMBIA NY-WESTERN GREENE NY-  
INCLUDING THE CITIES OF...HUDSON...NORTH ADAMS AND PITTSFIELD  
1029 AM EDT TUE MAY 18 2004
```

```
...WINTER WEATHER ADVISORY IN EFFECT FROM 12 PM WEDNESDAY TO 11 PM  
EDT WEDNESDAY...
```

**O** – Operational VTEC

**NEW** – New hazard (first issuance)

**KALY** – Albany, NY WFO

**WW** – Winter Weather

**Y** – Advisory

**0023** – 23rd Winter Weather Advisory issued this year

**040519T1600Z** – Hazard begins at 16Z on 5/19/04

**040520T0300Z** – Hazard ends at 03Z on 5/20/04

# Continuing Hazard(s)

```
NYZ032-033-042-192200-  
/O.CON.KALY.ZF.Y.0002.000000T0000Z-040518T1930Z/  
/O.CON.KALY.HW.A.0004.040519T1600Z-040520T1000Z/  
HAMILTON NY-NORTHERN HERKIMER NY-NORTHERN WARREN NY-  
1002 AM EDT TUE MAY 18 2004
```

...FREEZING FOG ADVISORY REMAINS IN EFFECT UNTIL 3:30 PM EDT THIS AFTERNOON...

...HIGH WIND WATCH REMAINS IN EFFECT FROM WEDNESDAY AFTERNOON TO THURSDAY MORNING...

**O** – Operational VTEC

**CON** – Continued hazard (followup)

**KALY** – Albany, NY WFO

**ZF** – Freezing Fog

**HW** – High Wind

**Y** – Advisory

**A** - Watch

**0002** – 2nd Fz. fog adv.

**0004** – 4th High wind watch

**000000T0000Z** – Hazard already in effect

**040518T1930Z** - Hazard ends at 1930Z on 5/18/04

**040519T1600Z** – Hazard begins at 16Z on 5/19/04

**040520T1000Z** – Hazard ends at 10Z on 5/20/04

# Cancelled/Cleared Hazard

```
NYZ079-081-272316-  
/T.CAN.KOKX.IS.W.0005.000000T0000Z-040728T1013Z/  
NORTHEAST SUFFOLK NY-SOUTHEAST SUFFOLK NY-  
INCLUDING THE CITIES OF...CENTER MORICHES...EAST SHOREHAM...  
HAMPTON BAYS...MANORVILLE...MASTIC...MASTIC BEACH...RIDGE...  
RIVERHEAD AND WADING RIVER  
617 PM EDT TUE JUL 27 2004
```

```
...TEST ICE STORM WARNING IS CANCELLED...
```

**T** – Test product

**CAN** – Cancelled hazard

**KOKX** – Upton, NY WFO

**IS** – Ice Storm

**W** – Warning

**0005** – 5th Ice Storm Warning issued this year

**000000T0000Z** – Hazard ongoing

**040728T1013Z** – Hazard originally ended at 1013Z on 7/28/04



# Upgraded Hazard

```
MDZ002-003-VAZ021-025>029-036>038-WVZ048>052-054-055-030456-  
/O.UPG.KLWX.FW.A.0004.000000T0000Z-040404T0500Z/  
/O.NEW.KLWX.FW.W.0003.040403T1700Z-040404T0500Z/  
ALBEMARLE VA-ALLEGANY MD-AUGUSTA VA-BERKELEY WV-FREDERICK VA-  
GRANT WV-GREENE VA-HAMPSHIRE WV-HARDY WV-HIGHLAND VA-MINERAL WV-  
MORGAN WV-NELSON VA-PAGE VA-PENDLETON WV-ROCKINGHAM VA-SHENANDOAH VA-  
WASHINGTON MD-  
INCLUDING THE CITIES OF...ROMNEY...PETERSBURG...MOOREFIELD...  
MARTINSBURG...KEYSER...WINCHESTER...WAYNESBORO...  
UNIVERSITY HEIGHTS...STAUNTON...HARRISONBURG...CHARLOTTESVILLE...  
HAGERSTOWN AND CUMBERLAND  
558 PM EST FRI APR 2 2004  
  
...RED FLAG WARNING IN EFFECT FROM 12 PM SATURDAY TO 12 AM EST  
SUNDAY...
```

**O** – Operational VTEC

**UPG** – Upgraded hazard

**NEW** – New Hazard

**KALY** – Albany, NY WFO

**FW** – Fire Weather/Red Flag

**A** – Watch

**W** - Warning

**0004** – 4th Fire Wx Watch

**0003** – 3rd Red Flag Warning

**000000T0000Z** – Hazard already in effect

**040404T0500Z** – Hazard would have ended at 05Z on 4/4/04

**040403T1700Z** – Hazard begins at 17Z on 4/3/04

**040404T0500Z** – Hazard ends at 05Z on 4/4/04

# Downgraded/Replaced Hazard

```
CTZ001-NYZ063>066-190117-  
/O.CAN.KALY.SN.Y.0011.040519T1600Z-040520T0300Z/  
/O.NEW.KALY.WW.Y.0023.040519T1600Z-040520T0300Z/  
EASTERN DUTCHESS NY-EASTERN ULSTER NY-NORTHERN LITCHFIELD CT-  
WESTERN DUTCHESS NY-WESTERN ULSTER NY-  
INCLUDING THE CITIES OF...ARLINGTON...BEACON...KINGSTON...  
MYERS CORNER...NEW PALTZ...POUGHKEEPSIE AND TORRINGTON  
1029 AM EDT TUE MAY 18 2004
```

```
...SNOW ADVISORY IS NO LONGER IN EFFECT...  
...WINTER WEATHER ADVISORY IN EFFECT FROM 12 PM WEDNESDAY TO 11 PM  
EDT WEDNESDAY...
```

**O** – Operational VTEC

**CAN** – Cancelled      **NEW** – New hazard (1st issuance)

**KALY** – Albany, NY WFO

**SN** – Snow      **WW** – Winter weather

**Y** – Advisory

**0011** – 11th Snow Adv.      **0023** – 23rd Winter Wx Adv.

**040519T1600Z** – Hazard begins at 16Z on 5/19/04

**040520T0300Z** – Hazard ends at 03Z on 5/20/04

# Expiring Hazard

VAC003-047-079-113-271634-  
/X.EXP.KLWX.SV.W.0056.000000T0000Z-040727T1615Z/  
...THE SEVERE THUNDERSTORM WARNING FOR SOUTHWESTERN CULPEPER...  
MADISON...GREENE AND NORTH CENTRAL ALBEMARLE COUNTIES EXPIRES AT 1215  
PM EDT...

- X** – Experimental VTEC in an Operational product
- EXP** – Expiring hazard (last issuance of this hazard)
- KLWX** – Sterling, VA WFO
- SV** – Severe Thunderstorm
- W** – Warning
- 0056** – 56th Severe thunderstorm warning this year
- 000000T0000Z** – Hazard ongoing
- 040727T1615Z** – Hazard ends at 1615Z on 7/27/04



# Corrected Hazard

```
NYZ077>081-140033-  
/O.COR.KOKX.BZ.A.0010.040713T2232Z-040714T2232Z/
```

**O** – Operational VTEC

**COR** – Corrected hazard

**KOKX** – Upton, NY WFO

**BZ** – Blizzard

**A** – Watch

**0010** – 10th Blizzard Watch issued this year

**040713T2232Z** – Hazard begins at 2232Z on 7/13/04

**040714T2232Z** – Hazard ends at 2232Z on 7/14/04

# Questions/Comments

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