Global Emergency Response is the unique commercial alliance of:

- **Air Routing International Corporation**, Houston, Texas, USA;
- **EMERCOM (The Ministry of the Russian Federation for Civil Defense, Emergencies and Elimination of Consequences of Natural Disasters)**, Moscow, Russia, CIS;
- **Ilyushin Aviation Joint Stock Co Ltd**, Moscow, Russia, CIS; and
- **Total Corporate Aviation Services Ltd**, Calgary, Alberta, Canada.

Bringing together an operation seeking to deploy internationally the largest and demonstrably most potent and effective fire-fighting aircraft in the world:

**The Ilyushin 76TD “waterbomber” (Il-76)**

“the extreme machine”

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**Tom Robinson**

International Liaison, EMERCOM  
Chief Administrator, Global Emergency Response  
Chairman of the Board, Virginia Fire & Police Museum  
El Presidente del Centro de Entrenamiento de Bomberos Profesionales de Peru  
Adjunct Instructor: Virginia Office of Fire Programs; Virginia Office of Emergency Services

Awards  
The President’s Thousand Points of Light Award, 1992  
Governor’s Gold Medal for Volunteering and Excellence (x 2)  
National Heroism and Community Service Award

Tom Robinson, through his various roles, is widely respected as a leading international authority in fire fighting, regularly tutoring on the subject. He has campaigned for six years to see the Ilyushin 76TD “water bomber” used against the forest fires of North America, where the greatest instance of loss of life occurs as a result of fire, and around the world. His awareness of, and concern for loss of life and property through forest fire has driven him through this time.

“Lives, homes, property and millions of acres of valuable timber could have been spared... had the Russians been allowed to assist in fighting our worst wildfires in over half a century.”

“The future of large wildfire mitigation is the Ilyushin 76TD Waterbomber.”
**Il-76 Technical Detail**

The Il-76, unlike all other fire-fighting aircraft in current use, is a turbo-fan jet. Primarily, it is a heavy-lift aircraft widely in use globally in civilian, military and disaster mitigation operations. The 11,000-US gallon (42,000-litre) VAP2 twin tanking system with gravity release makes the aircraft ideally suited to combating large forest fires and severe oil spill dispersal.

The military requirement characteristics ensure it has suitability for battlefield conditions, with short take off/land capabilities even on unimproved grass strips. A 20-wheel undercarriage gives the aircraft a tremendously "light footprint". Recommended runway length is 6000 feet (1850 meters), absolute only when the aircraft is fully laden with fuel and payload (a full 11,000-gallon payload would be substantially less than maximum).

The range of the aircraft is 3000+ miles (5000 kilometers) with a cruising speed of 500mph (800kph or 430 knots). In drop mode the Il-76 travels at 300 feet (90 meters) above ground level at a speed of 175mph (280kph or 151 knots). This drop speed is exactly the same speed as all other waterbomber, fire-fighting aircraft; the height above ground is marginally greater, giving increased safety, whilst not compromising load dispersion. Liquids descend vertically, as rain, ensuring even penetration of forest canopy and optimal effect on forest floor.

The dual tanking system gives the opportunity to release the payload in either consecutive or simultaneous mode. In a consecutive mode the aircraft would release the 11,000-gallon payload over an area 3950 feet (1.2 kilometers) by 295 feet (90 meters). For greater potency, the simultaneous mode releases a full payload over an area 1800 feet (550 meters) by 325 feet (100 meters). A drop pass will release a full payload in one 8–10 second pass with water, or a 15–20 second pass with retardant additive. The Il-76 can be loaded with a full payload in 15 minutes ready for take-off. Monsanto Phos-Chek WD 881 is certified for use with the Il-76, other retardant additives are suitable for certification. A new tanking system currently in development by Ilyushin Aviation will give a higher payload of 15,000 gallons and a variable release.

The aircraft is equipped with heat-seeking devices and associated computer-driven fire data simulations providing assistance with aiming the drop for maximum effect on mass fire.

Leading edge wing designs and special flaps together with high-lift devices and thrust reversers on each of the four very powerful engines allow for low, slow flight, and safe landings on remote, rough and generally shorter runways. These are ideal features for remote drop missions of any kind including, for example, dropping relief supplies bundles, pre-fabricated hospitals, oil spill containment equipment, and the like.

This emergency response service aircraft comes complete with a fully experienced, qualified and certified EMERCOM crew of eight, ground fire-fighting crew if required, spares for fix-and-fly servicing and full pumping equipment for tank filling.

Such capabilities give this remarkable aircraft considerable advantages over the other great fire-fighting aircraft. The Martin Mars is capable of releasing 7200 gallons, and is reputed to have never lost a fire, but only 2 aircraft are left in existence. The C-130 Hercules, more regularly in use in fire fighting, has a capacity of 3000 gallons. Both of these aircraft, indeed all other fire-fighting planes are of turbo-prop propulsion.

With many other fire-fighting planes being of 1950s technology, and with no new large-volume waterbombing capability aircraft currently on the drawing board, or modern comparative aircraft suitable for conversion, the future of large fire mitigation is the Ilyushin 76TD "waterbomber". Essentially, this service is a stand alone, fully integrated service for combating large forest and wildland fire, as well as a range of other disaster and emergency response missions.

"The future of large wildfire mitigation is the Ilyushin 76TD Waterbomber" Tom Robinson
EMERCOM

In 1994, by Presidential Decree, President Boris Yeltsin directed that the Ministry of the Russian Federation for Civil Defense, Emergencies and Elimination of Consequences of Natural Disasters (EMERCOM) should be created, and appointed Sergei Kozhugetovich Shoigu as Minister. Minister Shoigu, of Tuva ethnic background, would appear to have been a particularly creative choice by Yeltsin, being a politician who continues to be widely adored by the Russian people.

In the first half of 1994, Russian disasters had shown a near one-third increase over the same period of the previous year. 20,000 people were affected with close to 1200 fatalities, and significantly, included six nuclear plant emergencies. In 1996, an early use by EMERCOM saw the Il-76 in response to a blazing oil lake fire in Volgograd. EMERCOM has won the affection of the Russian nation with the work performed following the Moscow bomb-blasts that were attributed to Chechen rebels.

The EMERCOM team entered the international arena of extreme complex and non-complex emergency response with teams responding to humanitarian needs in Bosnia, the January 1999 Colombian earthquake and the August 1999 Istanbul earthquake. The teams may not have had the crisp uniforms or even the sophisticated equipment of other international response teams but proved as professional and capable as any. As a result of the Turkish earthquake, an oil refinery at Izmit burned for a week with German fire fighters struggling to bring the blaze under control. The Turkish Minister of the Interior stepped in and invited EMERCOM to send two Il-76 to attend the fire. The blaze was extinguished by the two “waterbombers” in less than one hour. In 2000 the Il-76 facilitated the humanitarian effort of EMERCOM to Mozambique. To date EMERCOM has responded to emergencies in nearly 60 countries around the globe.

The future of EMERCOM is seen to be in the international arena as well as the domestic. National border controls hinder the work of non-complex emergency response teams. Sergei Shoigu believes that an international response team under the auspices of the United Nations should be created. EMERCOM and its ‘extreme machine’ the Ilyushin 76TD “waterbomber” would be an integral part of that agency. In EMERCOM, “we have developed a professional and efficient system that has saved more than 50,000 lives, and we are very proud of this achievement.” Sergei Shoigu, EMERCOM Minister (extract from an interview with The Moscow Times).

See also the “Global Emergency Response Website” at [http://www.waterbomber.com](http://www.waterbomber.com)

For the most comprehensive information on wildfire (some emphasis is paid to the USY2K season) visit “The Fire, Smoke & Haze” website at [http://www.geocities.com/vadivale/fire.html](http://www.geocities.com/vadivale/fire.html)

For the preparedness, reporting, and monitoring of non-complex disasters ‘en Espagnol’, visit “Incident Commander” website at [http://www.desastres.org](http://www.desastres.org)

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