

ROBOTS IN THE

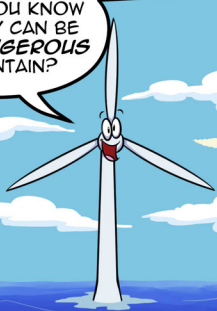
DANGER ZONE!!

"WIND TURBINES"



WIND TURBINES HARNESS THE WIND TO PRODUCE ENERGY...

BUT DID YOU KNOW THAT THEY CAN BE QUITE DANGEROUS TO MAINTAIN?



DANGERS SUCH AS:

THE FOUNDATION CRACKING

MOTOR FAILURE

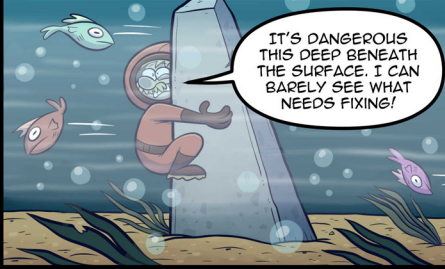
EXPOSED ENVIRONMENT, HOLD ON, JACK!

WHATEVER YOU DO, BORIS: DON'T SNEEZE!



— DANGEROUS REPAIR AND MAINTENANCE OPERATIONS, INCLUDING REMOVING BIOFOULING OFF TURBINE BLADES.

FIXING THESE ISSUES IS NO WALK IN THE PARK EITHER! FOR EXAMPLE: YOU HAVE TO WORK UNDERWATER TO REPAIR THE FOUNDATIONS, WHERE YOU FACE THE DANGERS OF POOR VISIBILITY AND UNPREDICTABLE CURRENTS.



IT'S DANGEROUS THIS DEEP BENEATH THE SURFACE. I CAN BARELY SEE WHAT NEEDS FIXING!

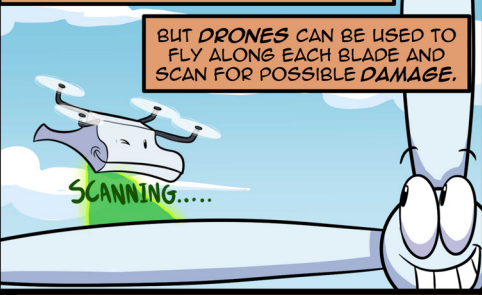
HUMANS AREN'T DESIGNED TO MAINTAIN WIND TURBINES, AND SO IT'S DANGEROUS FOR THEM.

BUT THESE ROBOTS AND SOFTWARE ARE SPECIFICALLY DESIGNED FOR THE JOB!



CHECKING FOR DAMAGE ON A TURBINE BLADE AND REPAIRING ANY FOUND CAN BE TRICKY FOR A HUMAN.

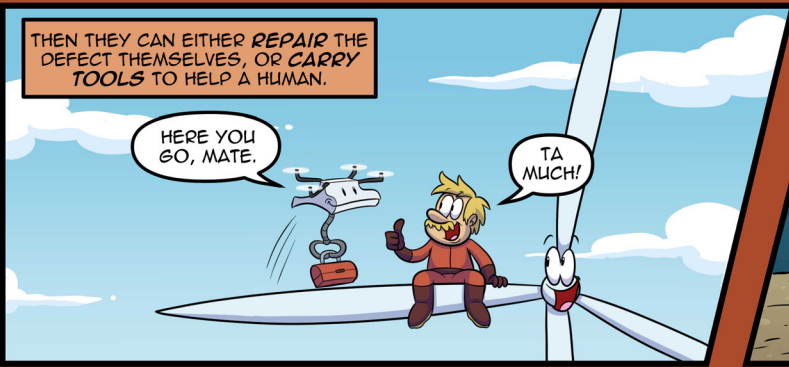
BUT DRONES CAN BE USED TO FLY ALONG EACH BLADE AND SCAN FOR POSSIBLE DAMAGE.



THEN THEY CAN EITHER REPAIR THE DEFECT THEMSELVES, OR CARRY TOOLS TO HELP A HUMAN.

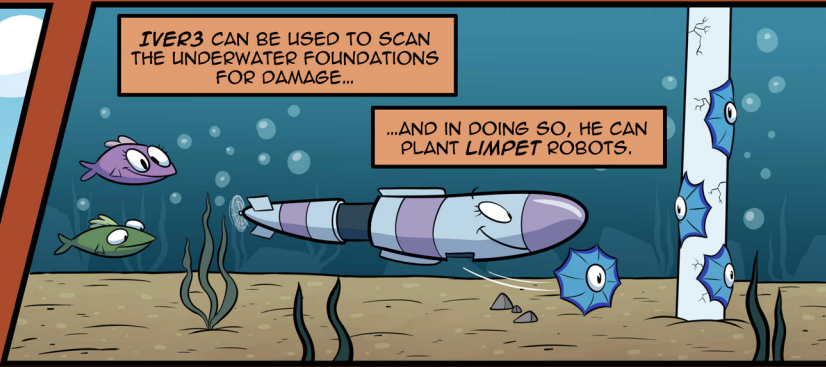
HERE YOU GO, MATE.

TA MUCH!



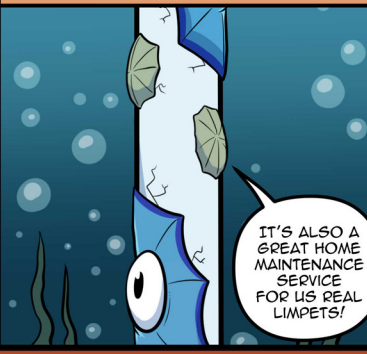
IVER3 CAN BE USED TO SCAN THE UNDERWATER FOUNDATIONS FOR DAMAGE...

...AND IN DOING SO, HE CAN PLANT LIMPET ROBOTS.



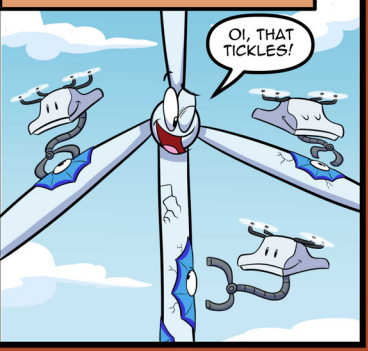
THE LIMPET ROBOTS SIT ALONGSIDE ACTUAL LIMPETS AND MONITOR THE STRUCTURE.

IT'S ALSO A GREAT HOME MAINTENANCE SERVICE FOR US REAL LIMPETS!



THE LIMPETS CAN ALSO BE PLANTED ON THE SURFACE OF THE STRUCTURE BY DRONES.

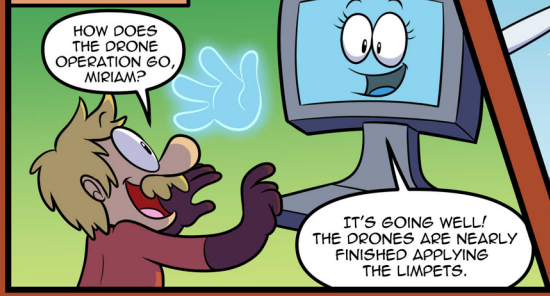
OI, THAT TICKLES!



ALL THE WHILE MIRIAM CAN COLLECT INFORMATION FROM THE DIFFERENT ROBOTS, WHEN QUERIED BY A HUMAN. MIRIAM SPEAKS ALL THE ROBOTICS LANGUAGES AND CAN TALK TO ANY OPERATOR USING A HUMAN LANGUAGE TOO.

HOW DOES THE DRONE OPERATION GO, MIRIAM?

IT'S GOING WELL! THE DRONES ARE NEARLY FINISHED APPLYING THE LIMPETS.



WITH THEIR HELP, US WIND TURBINES CAN CONTINUE TO BE AWESOME WITHOUT PUTTING HUMAN LIVES AT RISK.

BUT NONE OF THEM ARE ALLOWED TO WORK BEFORE THEIR V&V (VALIDATION & VERIFICATION), TO MAKE SURE THEY'RE WORKING PROPERLY BEFORE BEING DEPLOYED.

AW, WHEN CAN I GO AND HELP??

ONLY WHEN I SAY SO, PAL!

