

## Stories From the Future

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# The Coming Era of Autonomous Vehicles

**In the next decade**, autonomous vehicles will evolve to become the ultimate mobile computer. These intelligent and connected robots will be nomadic nodes on the Internet of Things, efficiently shuttling atoms around our built environment not unlike packets on the Internet of bits. Sometimes we will ride around inside these mobile computers; just as frequently, they will bring us what we need wherever we are. As the autonomous vehicles traverse our concrete networks, they will collect and share data about the world at very high resolution. This real-time data will help us index our physical world with a greater resolution than ever possible. As that database becomes more comprehensive,

drawing information from myriad sources, it will be the backbone of a new kind of human-machine interface: a search engine for reality itself.

But it's a long road ahead. Working with one of our longstanding clients in the automotive industry, Institute for the Future developed an outside-in, ten-year forecast on the future of autonomous vehicles. The aim was to provoke insights about possible consumer use-cases for fully autonomous vehicles looking ten years out. We presented the forecast in the form of short comics, "Stories from the Future," that are driven by collisions at the intersection of technology and culture.

## Matter Routing: The Autonomous Vehicle as a Node on the Internet of Things

THE FREEMANS HAVE JUST MOVED INTO THEIR DREAM HOME. WHILE THEY LOVE THEIR NEW PLACE, THEY DO HAVE A COUPLE OF IMPROVEMENTS THEY WOULD LIKE TO MAKE.

ALL IT NEEDS IS A NEW DECK!

AT THE HARDWARE STORE, THEY DIGITALLY DESIGN THE DECK THEY'D LIKE BUILT. THE STORE OFFERS A "DELIVER, SWARM, BUILD" SERVICE PACKAGE AND THEY SIGN UP.

AFTER THE UNASSEMBLED DECK IS ROUTED TO THEIR HOME IN AN AUTONOMOUS TRANSPORTER, THE ASSEMBLY SYSTEM KICKS INTO GEAR.

THE HARDWARE STORE HAS PARTNERED WITH A "LYFT FOR BUILDERS" COMPANY THAT SEARCHES NEARBY FOR THE BEST QUALIFIED WORKERS FOR EACH PART OF THE JOB. AS EACH WORKER ACCEPTS, AN AUTONOMOUS PICK-UP TRUCK IS ROUTED TO THEIR HOMES TO TRANSPORT THEM AND THEIR TOOLS TO THE JOB SITE.

ON SITE, THE SWARM SYSTEMS TIGHTLY CHOREOGRAPH THE PROCESS, ARRANGING, FOR EXAMPLE, FOR THE FOUNDATION TO BE BUILT JUST BEFORE THE ASSEMBLERS ARRIVE.

ONCE THE JOB IS COMPLETED, ALL SCRAP IS AUTONOMOUSLY TRUCKED TO THE PROPER RECYCLING FACILITY.

ACCORDING TO THE ALGORITHM, IF WE CAN FINISH THE RAILING WHILE THE CONCRETE IS BEING PRINTED, WE'LL BE OUT OF HERE IN TIME FOR LUNCH.

Y'KNOW, THE KITCHEN COULD USE SOME UPDATING.

## Mobile Family Room: The Journey is the Destination

BILL AND JOAN BURROUGHS ARE PLANNING A FAMILY VACATION TO DISNEYLAND. THEY NEED TO DECIDE WHETHER TO DRIVE THE EIGHT HOURS OR FLY, SPENDING AN HOUR IN THE AIR.



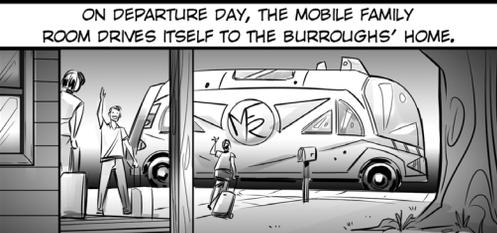
THE TRAVEL TIME IS ABOUT THE SAME ONCE WE INCLUDE THE AIRPORT DRIVE, BOARDING, AND BAGGAGE CLAIM. BUT DRIVING IS CHEAPER!



YES, BUT EIGHT HOURS CRAMMED INTO THE CAR IS A LONG TIME.



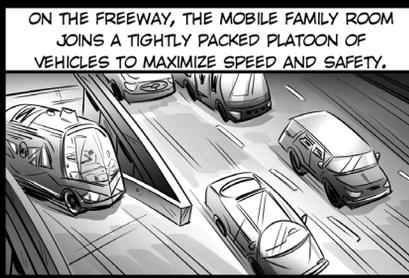
WHAT ABOUT BOOKING AN AUTONOMOUS **MOBILE FAMILY ROOM**? IT'S STILL CHEAPER THAN FLYING AND WE'LL HAVE PLENTY OF SPACE TO STRETCH OUT.



ON DEPARTURE DAY, THE MOBILE FAMILY ROOM DRIVES ITSELF TO THE BURROUGHS' HOME.

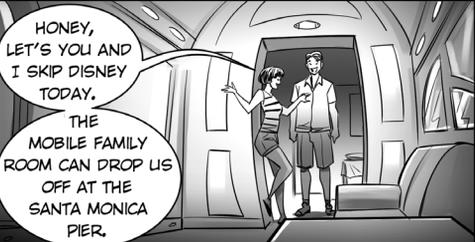
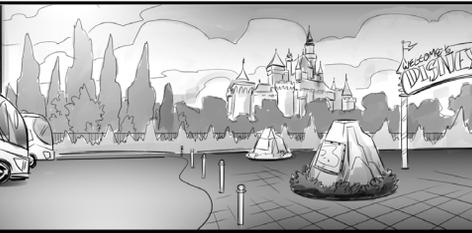
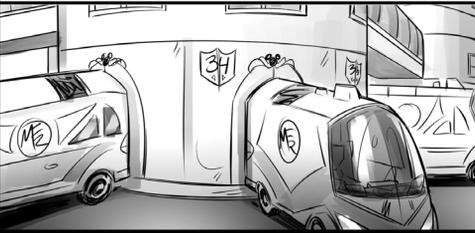


YOUR MOM AND I ARE GOING TO NAP BUT YOU KIDS CAN PICK A MOVIE OR PLAY GAMES.



ON THE FREEWAY, THE MOBILE FAMILY ROOM JOINS A TIGHTLY PACKED PLATOON OF VEHICLES TO MAXIMIZE SPEED AND SAFETY.

THE DISNEYLAND MOTEL PODTEL IS A DOCKING HUB FOR AUTONOMOUS TRANSPORTS, COMPLETE WITH A POOL, FITNESS CENTER, RESTAURANTS, AND OTHER HOTEL AMENITIES.



HONEY, LET'S YOU AND I SKIP DISNEY TODAY.

THE MOBILE FAMILY ROOM CAN DROP US OFF AT THE SANTA MONICA PIER.



WHILE THEY ENJOY THE PIER, THE MOBILE FAMILY ROOM PARKS ITSELF IN A DESIGNATED LOT NEARBY UNTIL THEY CALL FOR IT.

## The Lone Commuter: Rest, Work, Relaxation, Relief

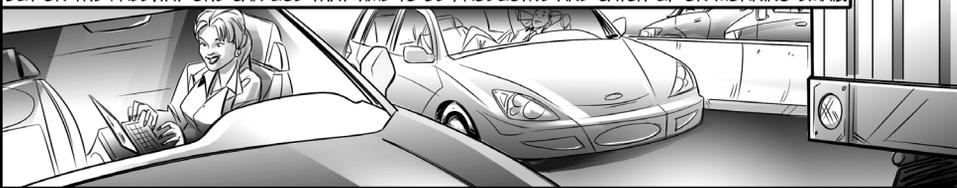
PATRICIA SMITH ENJOYS THE SOLITUDE OF RIDING IN HER OWN CAR, BUT DURING RUSH HOUR HER 50 MILE COMMUTE COULD TAKE 90 MINUTES.



UNTIL SHE LEAVES HER SUBURBAN VILLAGE, SHE DRIVES HERSELF AS REQUIRED BY STATE LAW.



BUT ON THE FREEWAY SHE CAN USE THAT TIME TO BE PRODUCTIVE AND CATCH-UP ON MORNING EMAIL.



THE CAR DROPS HER AT THE OFFICE FIRST, THEN PARKS ITSELF IN AN INEXPENSIVE LOT A FEW MILES AWAY.



AFTER THAT MEETING, I NEED A DRINK... OR TWO. COME WITH ME!



THAT THIRD GLASS OF MERLOT DID ME IN. I SHOULD PAGE MY CAR.



ON THE DRIVE HOME, PATRICIA CAN RELAX.



JUST OUTSIDE THE CITY LIMITS, HER CAR PARKS AT A COMMUTER LOT WHERE SHE PLUGS IT IN FOR A CHARGE AND CATCHES A TAXI WITH A DRIVER HOME.



## A Collaborative Commute: Workplace on Wheels



## Gameful Driving: Vehicle as Personal Recreation Space

AFTER FINALS, AYSA IS EAGER TO GET HOME TO HER PARENTS' HOUSE ACROSS THE STATE. SHE'S THRILLED THAT THEY SENT THEIR PERSONAL RELAXATION VEHICLE TO PICK HER UP.

WHO'S READY FOR A SPACE ADVENTURE?

LOADING... AUTODRIVE // ON

WHILE SHE NORMALLY LIKES TO LOOK OUT THE WINDOWS AND LET HER MIND WANDER WHEN IN A CAR, THIS TIME ASYA ACTIVATES THE IMMERSION SCREENS TO PLAY HER FAVORITE MULTIPLAYER GAME WITH HER FRIENDS.

CRASH

PUP PUP

THE SPACE ADVENTURE GAME TAKES THE REAL CONTOURS OF THE ROAD INTO ACCOUNT TO DELIVER A VISCERALLY CONVINCING EXPERIENCE.

WHEN THE VEHICLE APPROACHES A RESIDENTIAL AREA, THE COMPUTER INFORMS ASYA THAT SHE NEEDS TO BE ON STANDBY TO TAKE THE WHEEL. THE GAME MODE SHIFTS TO OVERLAYING AN ALIEN WORLD OVER THE REAL-WORLD OBSTACLES OUTSIDE.

WOO-HOO!

NEW HIGH SCORE!  
1,685,352

AUTO  
DRIVE  
CAUTION

AS AYSA PULLS UP AT HOME, SHE'S NOTIFIED THAT SHE HIT A NEW HIGH SCORE. THE TRIP WAS A SUCCESS