**UPDATED VERSION**

**MACIEJ WOJTYSZKO**

**(translated to English and adapted to Portland Cyber Theatre by Marek Perkowski)**

**What makes a robot happy, or**

**Hopla ,Hopla ,Hoc ,Hoc**

(scenario for Portland Cyber Theatre)

Participating

1. **TWR** - Text Writing Robot – Robot HR-OS1 robot (green, Marek). Use strong male voice for this robot.
2. **MCR** - Music Composing Robot – Robot HR-OS1 robot (red, Saly). Use female voice for this robot.
3. **BSM** - Beautifully Singing Machine – Robot HR-OS1 robot (blue, BSR). Use affective, even hysterical and artistic voice for this robot. Female.
4. **Professor** – human, Marek Perkowski. Students-animators should create sound only in this first variant.
5. **Student Assistant** – human, one of Perkowski’s students. Students-animators should create sound only in this first variant.
6. **Voice of PSU President.**
7. **Bach.** iSOBOT 1- robot. Karate master, musician, playing air guitar and dancing. Studies at ECE PSU. Uses voice of a theatrical child, gnome or fairy tale character.
8. **Vivaldi.** iSOBOT 2- robot. Karate master and musician, playing air guitar and dancing. Studies at ECE PSU. Uses voice of a theatrical child, gnome or fairy tale character.

**INTRODUCTION**

**Scene A1 (introduction of robot TWR)**

The play is played on the small stage of Portland Cyber Theatre, as shown in the movie. Decorations are the same as in the movie.

On a nearly dark stage there are two robots. They lay. One lays on its stomach (TWR), one lays its back (MCR). They do not move. The robot TWR is located in the center.

The robot that lays on its back (MCR) is located in the right.

***Curtain opens.***

*MUSIC starts to play: main music motive as an effective beginning of the spectacle.*

*The middle robot, called TWR, lightens in green. He gets up to standing position using MOTION\_24.*

TWR

(*in standing position*)

Ohh, I slept really well! *(stretches hands and produces a sound of loud yawning)* I slept and slept, but I am afraid some of my circuits are faulty, because I had strange dreams. *(comes few steps forward towards the audience)* Such dreams occur to me only when there is some sparking in my cables.

*(stretches legs, one by one).*

I dreamt that I was in a dark hall and in front of there were humans who sat there and looked at me (looks around, towards the audience).

Well, I guess I better do my stretches!*(does pushups and other gymnastic exercises, Karate, boxing, jumps, etc ).*

My head is bursting *(he holds his*

*head with both his hands as in pain)*, because I don’t know, what should I tell these humans.

*(the robot leans forward and raises his hand to his eyes as looking for something in the audience)* Oh, oh! And maybe this is not a dream? Am I mistaken that I see somebody sitting here? *(looks around)* Hey, humans, are you here? Tell me, are you? *(pause – robot waits for an answer)* Somehow silent is this answer. *(shouts directly to the audience)* Hey, shout loudly: “We are here!” *(presses palms to his ears as trying to hear better) (pause – he waits for the response of the audience)* It could be louder still. *(pause)*

I’m sorry, I forgot that you are humans and not robots like me! If I want to be louder, all I have to do is turn up my volume potentiometer! (*roar of a speaker)* “I am!” like that!

(*he continues using some of our 200 motions that have been already recorded and named*).

**Scene A2 (Robot TWR and Robot MCR)**

*Immediately after the roar “I am!” the robot that sleeps at the right side of the stage is awaken. We call him MCR. It is lightened in blue. This robot sleeps on his back, on a floor. He gets up to the standing position using MOTION\_25.*

MCR

*(stretches hands, head, legs, does gymnastics, but differently than robot TWR).*

What’s going on here? I was sleeping so well.

*(MCR walks to other robot, approaches and walks around MCR, looking at him).*

TWRDid you dream?

*(robots must always accompany text with gestures. These can be meaningful gestures like related to the text, for instance using both arms to show “small” (hands close) or large (hands far away) or just the typical gestures of speakers. Humans never stand completely without motionless, they always move hands or change position, they breathe and make some nervous gestures. This should be reproduced on our robots. One of mistakes of previous animations by students was that robots were standing without any motions while talking).*

MCR

No, I did not.

TWR*(talks to MCR,who is now close to him)*

Perhaps you did not spark.

I sparked..... and look what a dream I had *(points with his hand to the audience)* This! *(electric sparks come out of the head or body of the robot)*

MCR

*(looks around, here and there)*

I see nothing. *(turns to TWR)* Perhaps it is just a daydream.

TWR *(talks to MCR)*

That’s what I just said! I slept and I dreamed about humans sitting in the audience looking at us. I presume they really exist!

MCR*(talks to TWR, as in doubt)*

Seriously?

TWR*(talks to MCR)*

Regulate your camera focusing mechanisms and you will see!

*MCR fires his eyes so that they rotate and for a long period of time he looks at the audience. This is done using computer controlled lights.*

MCR *(talks to TWR)*

Something, it seems as... Something like.. One moment please, one moment, ... just wait..., if they are your dream, then why should I see them?

TWR*(walks around but finally talks to MCR)*

That is what is so amazing! Perhaps you will tell me that they do not exist there? Maybe you’ll insist that they don’t exist? Eh?

MCR *(talks to TWR)*

Wait. *(he controls his vision system to perceive with maximum attention)*Maybe they do exist. *(goes forward and looks at the audience)* Oh, here is something, in the second row at left *(points to some person in approximately the second row of the audience)* it seems that this “something” really does exists. It looks like a human to me. *(turns head in a great surprise)*

TWR

*(approaches TWR and talks to TWR)*

Wait, I have to concentrate. *(he starts eye motion, he turns in the same direction)* Perhaps. It is highly probable that a human sits there and is looking at us. *(TWR looks carefully to the audience. The face of the selected human appears on one of the bottom screens)* But maybe it is only a delusion. That is how I evaluate this image I’m seeing. (*turns to MCR).*

MCR *(talks to TWR)*

This means, that the audience cannot be only your dream! *(looks again at the audience, another face of a person from the audience appears on one of the screens)*

TWR*(talks to MCR)*

Why?

MCR*(talks to TWR)*

Because if I see the audience too, it means that we are sharing a dream!

TWR *(talks to MCR)*

Well, yes. This is reasonable. From the fact that you see this *(points to the audience),* it follows that in some measure my dream belongs also to you.

MCR

*(comes to front, executes joyful motions,*

*talks to the audience)*

I understand! The humans in the audience are part of a common dream we are having! (*points to TWR)!*

TWR

Certainly! *(bangs his head)* I know! Now I know! *(turns affectively to MCR*) What is your name?

MCR

Em-cee-ar.

TWR *(seem not to understand)*

I beg your pardon?

MCR

*(talks to TWR)* This is just short abbreviation. *(comes to the front and talks to the audience)* I am a Music Composing Robot. In short, M-C-R. *(Looks around the stage*). Where are we?

TWR

We are in Portland Cyber Theatre, Portland, Oregon, USA. It is a part of Quantum Intelligent Robotics Laboratory. Our Professor and his students experiment on us, and they try to teach us new things.

TWR

*(talks to MCR)* To tell you the truth,

I am the smartest sentient being in this

Laboratory. *(shows his body gesture*

*„look how smart and great am I”).*

Well, Mister Professor is

also .... kind of smart....

He teaches me... And I teach him a trick

or two, sometimes.

But the students... Ehh...

*(he waives his right hand in frustration.*

*Looks to the audience).*

*(turns his attention to MCR)*

You know, I can arrange scenes, songs, dances,

performances, meetings, lectures, theatre plays,

... everything. I write and I organize.

MCR

Wow, you can do all of that?

TWR (*towards MCR)*

I will demonstrate my abilities to you now.

***Curtain closes.***

**Scene A3 (Robot TWR and Robot MCR text creation)**

***Curtain opens.***

TWR and MCR stand in the middle of the stage.

TWR *(turns to the audience)*

So, everything is now explained. I am T-W-R or Text Writing Robot. And,simply we dreamt up with MCR, the Music Composing Robot (*points to MCR*), our common expectations! *(MCR and TWR bow low and in the most gentle way to the audience).*

MCR

*(approaches TWR and asks him rhythmically)*

What do you mean - about our dream?

TWR

*(points with both arms to the audience,*

*talks to MCR)*

The audience! Our viewers! They are part of our shared dream, remember?

MCR *(talks to TWR)*

You think so?

TWR*(walks around but talks to TWR)*

Just think about – I was created with the goal to write texts. You were created to compose music. You (*points to MCR*), me (*points to himself*) and our audience (*points to the audience*) are just one dream.*(they dance together holding hands).*

**Scene B3 (Robot TWR and Robot MCR text creation)**

TWR

*(Suddenly turns to MCR and takes a big breath).*

So, before I slept I was poetizing myself the following poem:

*(recites very rhythmically, each word*

*appears synchronously on the large computer screen*

*in English. The lower middle screen*

*shows the camera view of the reciting robot)*

Ro-bot is a new cre-a-tion,

That is built for au-to-ma-tion,

It has ma-ny limbs for mo-tion,

Its heart is full of e-mo-tion,

Ro-bot’s tem-pe-ra-ment joy-ful

And its in-tel-lig-ence play-ful.

*(Both screens become dark now)*

MCR *(asks TWR)*

What makes the robot joyful?

Do You know?

TWR *(responds to MCR)*

I know. So far, I have not rhymed it, but I will do this in a moment. Robot is joyful, when it executes efficiently his planned tasks. Or, in my case – I enjoy putting rhymed texts together.

MCR

And I (*points to himself*) enjoy composing music. I would be a pleasure to compose music to your (*points to TWR with his hand*) text!

TWR

In that case – wait. *(He beats out a rhythm with his hands while he declaims)*

Ro-bot is a new cre-a-tion,

That is built for au-to-ma-tion,

It has ma-ny limbs for mo-tion,

Its heart is full of e-mo-tion,

Ro-bot’s tem-pe-ra-ment joy-ful

And its in-tel-lig-ence play-ful.

Never falls to self-de-ce-ption,

Has its senses for ...

*(turns to MCR and asks him)* What?

Let somebody help me with my poetizing!

*(turns to audience and declaims again)*

Never falls to self-deception,

Has its senses for ... for...?

TWR  
 *(pause – he waits for the answer*

*from the audience)* Thank you very much

PROFESSOR

*(professor’s head appears for a*

*moment at the left corner of the*

*black curtain)* perception!

TWR

*(looks at the professor and next continues)*

Never falls to self-deception,

Has its senses for perception!...

*(turns to MCR who watches with attention).* Do you like this?

MCR

*(shows his disapproval with hands).* This is too short for a song.

TWR

It will be longer in a moment *(once more he beats out a rhythm while he is reciting)*

Ro-bots built for in-te-ra-ction,

In-tel-li-gent con-ver-sa-tion,   
Creative improvisation,

Practice, theory, abstraction.

*(when he declaims, the English text appears simultaneously on the middle screen).*

Kinematic, self-explaining,

systematic, .....

*(pause – he waits for the help from the audience)*

PROFESSOR

*(comes from the right side of the black curtain)* entertaining! *(immediately he withdraws his head).*

TWR

Oh, you are right, exactly! entertaining.!

Kinematic, self-explaining,

systematic, entertaining.

*The screen displays:*

systematic, entertaining.

MCR

Can you add the refrain to this song?

TWR

Refrain, what is that?

MCR

Refrain is a part of a song that is repeated after each stanza.

This is some repeating part of the song.

TWR

Of course, I know what a refrain is!

Wait, wait! *(he sings)*

*Robots talk, play, and can sing.*

*Ma-chi-nes - kick-ing, dan-cing,*

*Twis-ting their arms, swin-ging butts,*

*New ma-chi-nes, our ro-bots,*

*Discs, ca-me-ras and soft-ware*

*Hard-ware, firm-ware, all is there.*

*Everybody comes to know*

*Famous Port-land Cy-ber Show,*

*Stu-dents sing, ro-bots dance rock,*

*Hopla, hopla, hoc, hoc, hoc.   
Hopla, hopla, hoc, hoc, hoc...*

MCR *(towards the audience)*

Perfect. And the melody to this refrain could be the following *(plays the musical phrase of the refrain, for instance pretending to play a violin - MUZ)*

TWR *(approaches MCR and asks)*

How did you create this melody?

MCR

I just counted syllables in your text... Then I divided... Look!

MCR and TWR *(robots sing the song’s part that they just created and dance to it).*

**Scene B4 (Robot TWR and Robot MCR music creation)**

*Animation 1 appears on the top large screen and may be on other screens as well.* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

*ANIMATION 1: text of refrain separated to syllables*

MCR

And I added notes to each. Sheet music.

ANIMATION 1: *notes added under the text. It is taken from our Bhutada’s MIDI composing program. Lights are synchronied with music.*

MCR *(reads from the screen)*

*Robots talk, play, and can sing.*

*Ma-chi-nes - kick-ing, dan-cing,*

*Twis-ting their arms, swin-ging butts,*

*New ma-chi-nes, our ro-bots,*

*Discs, ca-me-ras and soft-ware*

*Hard-ware, firm-ware, all is there.*

*Everybody comes to know*

*Famous Port-land Cy-ber Show,*

*Stu-dents sing, ro-bots dance rock,*

*Hopla, hopla, hoc, hoc, hoc.   
Hopla, hopla, hoc, hoc, hoc...*

This is so very simple! *(explains to the audience and from time to time to TWR)* It suffices to add sound to syllables. And notes are just the record of sounds!

TWR *(explains to MCR)*

Yes,yes. But first you should have all these sounds recorded in your memory!

MCR *(asks TWR)*

And you have them in your memory?

TWR

Nope.

MCR

So what is that you have in your program?

TWR*(explains to MCR)*

Words. Rhymes. For instance I search in a reverse vocabulary for a rhyme to “show” and I find...

TWR *(recites slowly, then faster and then very, very quickly).*

... [aux](http://www.rhymezone.com/r/d=aux), [beau](http://www.rhymezone.com/r/d=beau), [blow](http://www.rhymezone.com/r/d=blow), [crow](http://www.rhymezone.com/r/d=crow), [dough](http://www.rhymezone.com/r/d=dough), [flow](http://www.rhymezone.com/r/d=flow), [fro](http://www.rhymezone.com/r/d=fro), [glow](http://www.rhymezone.com/r/d=glow),[go](http://www.rhymezone.com/r/d=go), [grow](http://www.rhymezone.com/r/d=grow),

heigh-ho, [know](http://www.rhymezone.com/r/d=know),  [low](http://www.rhymezone.com/r/d=low), [mow](http://www.rhymezone.com/r/d=mow), [no](http://www.rhymezone.com/r/d=no), [oh](http://www.rhymezone.com/r/d=oh), [owe](http://www.rhymezone.com/r/d=owe), [plough](http://www.rhymezone.com/r/d=plough), [po](http://www.rhymezone.com/r/d=po), [pro](http://www.rhymezone.com/r/d=pro), [psuedo](http://www.rhymezone.com/r/d=psuedo),

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and many many more, many other rhymes.

Then I select a rhyme that suits me the most. *(each word appears on the screen in English, possibly with a short animation).*

**Scene B5 (Robots TWR, MCR and BSM)**

*The red light points to the robot that stands at the left of the stage. We will call this robot BSM. BSM is a woman robot with a personality of a spoiled diva.*

BSM

*(approaches TWR and turns to him)* Rubbish. Show – Crow, nonsense. *(screen shows Robots – stupidities)*

Could you guys finally complete creating this song, so I can sing it,...., sing and dance – I love dancing. *(dances around the two men).*

TWR

*(gestures as afraid of the aggressive woman robot)*

But, but,... who are you?

BSM

*(as offended, speaks proudly to TWR)* You don’t know? I am the Beautifully Singing Machine. Famous for performances in operas of New York and Tokyo. *(dances and performs)* I have no text writing program, nor the music composing program, but I have an excellent performance mechanism. *(she tries her voice)* Mi... mi... mi... la... la... la...

*(she comes to the front of the stage and talks to the audience)* I welcome you cordially! You must be worried that I may not be able to perform for you*.(talks to TWR and MCR)* Don’t worry, darlings. *(to the audience)* I can promise you, my dear audience, that as soon as the words and the melody have been created – I will perform for you. Hello! *(she waves her hand to the audience,dances and charms*)

MRT *(comes to BSM and asks her)*

What do you mean: “Have been created”?

BSM *(explains to the audience and other robots)*

Wow. First something does not exist.... does not exist at all, and next – it exists! When something doesn’t exist and then it does, it means it has been created!

TWR *(approaches BSM and looks at her)*

And that’s it? And you are not surprised that this exists?

BSM *(philosophically to the audience)*

It is astonishing, because why is there something rather than nothing?

MRT *(talks to BSM)*

Because if nothing existed there would be nobody to think about it! Ha, ha, ha!

BSM

*(escapes from MRT and goes towards the audience)*

This has become extremely confusing! my logic reasoning program wasn’t designed for this!

TWR *(to the audience, walking quickly in circles)*

Same here! My circuits are overheating! *(buzz of the circuits - EF)*

MCR

*(talks to TWR, to BSM and to the audience)*

Either way, new things are constantly being created. One thinks, one invents, and something new is devised! Just look around! (*points out with both hands to the stage - robotics laboratory around).*

BSM

*(happy, dances and talks to the audience)*

I know, I know! When trying to create something, you should have many ideas. Many, many, as many as possible! This is the same as with rhymes:

BSM

Automation

MCR

Perception

BSM

Interaction

MCR

Improvisation

BSM

Reception

MCR

Organization

TWR

And then select what is best of them all.

MRT

Concluding, creativity can be separated into two phases! First, to multiply ideas. As many ideas as possible! Such multiplication of ideas we call a MUTATION.

ANIMATION 3: a description MUTATION appears ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

TWR

And the second phase – the selection of the best ideas, the so called SELECTION PHASE.

ANIMATION 4: a description SELECTION appears ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

MCR

Selection, means choice. If there is only few ideas, there is not enough to choose from. Therefore it is so important at the beginning to multiple as many ideas from scratch as possible.

BSM

*(starts speaking quite slowsly)*

automation, perception, interaction, improvisation, reception, organization, demonstration, [haitian](http://www.rhymezone.com/r/d=haitian), [haitien](http://www.rhymezone.com/r/d=haitien), [neuration](http://www.rhymezone.com/r/d=neuration), [ration](http://www.rhymezone.com/r/d=ration),

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*(speaks very quickly, quicker and quicker like a tape recorder with very fast speed)*

TWR *(speaks to MCR)*

And then select the item that suits best.

**Scene B6 (Robots TWR, MCR and BSM)**

MCR *(speaks to the audience)*

And this is how I was selecting with my robot friend. He does words, I do musical notes.

BSM *(speaks to TWR and MCR)*

The audience helped us as well! You remember?

TWR

*(comes forward towards the audience)*

Does it mean that there are some CREATORS in the audience as well?

BSM *(talks to the audience)*

Of course! Welcome the Creators! Hail to the Creators in the Audience *(pause)* Louder! I do not hear! *(independently on what fell from the audience)* Yes, yes. The Creator cannot be shy. Author is somebody bold, somebody who is not afraid to test, try, and check.

MCR

*(talks to the robots and to the audience*

*while walking with excitement)*

They must be both bold and have the courage to invent something that never existed before. They have to exercise their imagination (*does gymnastic exercise*). Train their fantasy. Practice execution. (*continues doing gymnastic exercises*).

BSM *(asks MCR)*

How do they do this?

MCR *(talks to BSM)*

They have to ask themselves many funny and bold questions.

TWR *(jumps around, very excited)*

Without reflection! Without misgivings!

BSM *(asks TWR)*

For instance?

TWR *(to BSM and next to the audience)*

What would happen if a hippopotamus had wings and played the saxophones?

ANIMATION 5: a movie answering this question *(hippos fly and play saxophones)* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

TWR *(looking to the screen, talks to the audience)*

How could you use your nose to change the channel on a TV?

ANIMATION 6: a movie answering this question *(guy presses his huge nose and the TV set shows changing images– Durczok, monkey, landscape, whatever)* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

BSM*(looking to the screen, talks to the audience)*

And what if cars would change colors and shapes depending on the driver’s moods?

ANIMATION 7: a movie answering this question (guy drives in nerves and his car gets red, *snorts and spits, other car has a happy family and is peacefully blue)* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

MCR*(looking to the screen, talks to the audience)*

And what if music could replace food?

ANIMATION 8: a movie answering the question *(people swallowing sounds coming out from trumpets and violins)* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

TWR*(looking to the screen, talks to the audience)*

And what if Robots could think *(blocks his mouth with his palm, as not wanting to complete the sentence)*

*ANIMATION 9: as in Polish Song or using Bach and Vivaldi robots.* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

TWR

*(it seems that he is now afraid,*

*talks to the audience)*

oops!! Perhaps I said something that is not politically correct. Is it true that robots cannot think? *(pause for eventual response from the audience)* They can, of course they can! One robot friend of mine wins chess competitions against the world’s best chess players!

BSM *(approaches TWR and talks to him)*

And I know a robot that organizes production in a car company!

MCR*(approaches TWR and talks to him)*

And me and my friends are quite good at composing music *(extracts from himself few music sounds - MUZ)*

TWR*(talks to the audience)*

Truefully, so far robots think only a little bit...

BSM*(talks to the audience)*

In certain domain...

MCR*(talks to the audience)*

But very precisely.

TWR *(talks to the audience)*

And they make mistakes more rarely.

BSM*(talks to the audience)*

In principle, it is very hard to say what is thinking even is!

TWR*(talks to the audience)*

Therefore, we have to think a lot about thinking.

MRW*(talks to the audience)*

Because if you think a lot about quality of your thinking, it’s quite likely you will find out that you were not thinking correctly earlier.

BSM*(talks to the audience)*

And then when you understand why you were thinking correctly before, you can then start to learn to think correctly

TWR*(talks to the audience)*

May be not very well right away, but at least a little bit better!

BACH *(little iSOBOT runs into the stage)*

*(talks rhythmically with his funny half-human, half-robot, half-child voice)* Bach, Bach, Bach, my name is Bach.

I can think, I can dance,I can talk, I can sing.

VIVALDI *(little iSOBOT runs into the stage from the opposite site,)*

And my name is Vivaldi. I compose, music and prose. I calculate, I animate,

*Here use the same behaviors of these two robots as in previous videos of these two robots, many of them are in D2L or other our places for videos. More videos will be added. Reuse as many as you want, modify and be creative. Here is the place for your own inventions and creativity.*

*They dance, talk, walk, sing, play air guitars and ultimately walk out of the stage.*

TWR*(talks to the audience)*

May be these little guys exaggerate what they can do, but sure they are a new generation of entertaining robots.

**Scene B7 (Robots TWR, MCR and BSM, Professor, Student)**

*EF: Crackles, flashes, lightning discharges. Darkness appears. Robots loose most of their lights.*

*After a while we hear the voice of the Professor.*

VOICE OF A PROFESSOR *(behind the scene, behind the black curtain, from various sides)*

This looks like some breakdown. Thunderstorm or something. I am sorry *(inserts his head from the left of the curtain)* Ladies and Gentlemen, we will try to fix it as soon as possible. *(withdraws his head)* Ehh. *(plod, as something heavy falls down - EF)* Dangit, I see nothing! Hold on to the ladder please. Hold it, hold it well. *(terrible crash again - EF)* Ah, Oh, *(sound of pain coming from the old professor)*

my bones! I told you to hold it well!

VOICE OF A STUDENT ASSISTANT

I am sorry. *(noises)*

PROFESSOR

*(his head appears for a moment from the*

*right part of the curtain)*

Where are you now that I need you?

STUDENT ASSISTANT

I am sorry. *(their head appears from the left*

*part of the curtain)* Sorry, prof, I did not know

that you still needed my help!

*(terrible noises of various kinds behind*

*the scene, in all directions,ladder falls down)*

VOICE OF A PROFESSOR

How can you be so thoughtless! It was so obvious, that if you release the ladder I will fall down!

VOICE OF A STUDENT ASSISTANT

I am sorry, I just in a pensive mood.

VOICE OF A PROFESSOR

There you go. He-he-he-he. Are you even thinking? *(ironically)*

So what are you thinking about?

VOICE OF A STUDENT ASSISTANT

I was just thinking about our robots. Aren’t they fantastic? It would be great to talk to them.

VOICE OF A PROFESSOR

*(angry)* Hold the ladder!

*(sounds of repairing actions - EF)* Ready! Fixed.

*The lights of the stage and the lights of the robots get on.*

MCR*(talks to TWR, confused)*

What were we talking about?

TWR*(talks to MCR, confused)*

I’ll have to recall myself. Somehow I went off for a while.

BSM*(talks to MCR and TWR, confused)*

Me too! What a strange feeling.

TWR *(suddenly becomes happy and energetic)*

I remember! We were talking about my dream.

MCR

And about mine!

BSM

Not only about yours! It was our common dream. I remember vividly that we dreamt about the audience which was awaiting me to perform a song that the two of you were expected to write.

TWR

Certainly! *(declaims)*

Ro-bot is a new cre-a-tion,

That is built for au-to-ma-tion,

It has many limbs for motion,

Its heart is full of emotion,

Has its senses for perception,

Never falls to self-deception,

MCR

Wait! This will be the melody (*he creates the following sounds– MUSIC)*

**Scene B8 (Robots TWR, MCR and BSM, Professor, Student)**

*ANIMATION 10 begins: CJI 10: music notes notation, single notes, that correspond to the sounds that are played by MCR.*

*Plus, syllabes of the text appear below them.*

*There is also a small robot animation that jumps fromthe sound to the sound.* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

BSM *(talks to MCR and TWR)*

And now the refrain please!

MCR*(responds to BSM)*

No, no, this is a melody line, but one has to add some other sounds to it.See, this is called a musical arrangement.

*ANIMATION 10: animated description of subsequent sounds, gitare, kontrapunkt, etc.* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

*MCR*

*(Lists various instruments that we hear).*

*ANIMATION 10: continues* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

*(All robots dance).*

BSM *(talks to the audience)*

*Robots talk, play, and can sing.*

*Ma-chi-nes - kick-ing, dan-cing,*

*Twis-ting their arms, swin-ging butts,*

*New ma-chi-nes, our ro-bots,*

*Discs, ca-me-ras and soft-ware*

*Hard-ware, firm-ware, all is there.*

*Everybody comes to know*

*Famous Port-land Cy-ber Show,*

*Stu-dents sing, ro-bots dance rock,*

*Hopla, hopla, hoc, hoc, hoc.   
Hopla, hopla, hoc, hoc, hoc...*

And the melody line will be sung by me. *(sings) (knocks her head)* I have an idea! We can sing the Refrain together as a chorus!

TWR *(talks to BSM)*

We are supposed to sing?

BSM

*(comes forward and talks to the audience)*

Not only us. Our dream sings also!

TWR *(talks to MCR)*

That would be an Interesting experiment.

MCR*(talks to TWR)*

What would?

TWR*(talks to MCR)*

To check if the dream can also sing with us.

BSM

I think it can. But one has to work on it.

TWR

To work on a dream?

BSM

Encourage, enbolden.

MCR

Wait, wait, I did not complete composing.

*ANIMATION 10: continues* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

*EF: big crash behind the black curtain..*

BSM *(talks to MCR and TWR)*

Did you hear?

TWR

Something felt down!

MCR

Silence! Hey, you, I hear you!

*Robots apply their hands to ears in order to hear better.*

BSM, MCR, TWR*(together)*

We hear you!

VOICE OF A STUDENT ASSISTANT

Sorry, it is only me. I came to take the ladder and I tried to grab it so awkwardly that it fell down again.

BSM

Me, what “me”? Who are you?

VOICE OF A STUDENT ASSISTANT

I am a student assistant. I help keep your robot theatre operating.

*STUDENT ASSISTANT appears near the stage at the left.*

TWR

What does it mean: “I help”? But it is me who writes my texts!

MCR

And I compose my own music!

BSM

And I am performing by myself my songs!

STUDENT ASSISTANT

*(to BSM)* Of course. Naturally, you act on your own. Naturally. I am here only to help you in some extraordinary cases... For instance,if the electric power delivery was stopped or if the voltage tension would fall too low.

BSM

My tension never goes down! I am an excellent performing robot and I always create high tension!

STUDENT ASSISTANT

Sure you do. However, sometimes one has to regulate something, twirl, lubricate....

TWR

Wait a moment. Does it mean that you can turn us off?

BSM

(*dramatically raises hands to the heavens*) Shut down!!! Switch off!!

STUDENT ASSISTANT

Just by myself? I cannot. No, no. I would have to ask Mister Professor. And he would surely not agree. You are our pride! The robot theatre is very useful to us!

BSM

*(talks to TWR)* Did you hear that! We are useful. Nobody will turn us off!

TWR

*(talks to BSM)* I wouldn’t be so sure. Hello! *(talks loudly to the non-visible Student Assistent)* Mister, are you there still?

STUDENT ASSISTANT

*(comes to TWR)* I am still here, but I am now departing. I do not want to disturb you.

MCR

It is so nice of you. But, we need one more voice in our chorus. Could you sing with us, please?

STUDENT ASSISTANT

*(very surprised, turns to MCR)* Me?

MCR

You, you. *(whispers silently to other robots)* You know, if he is singing with us, he will be not able to disconnect us.

TWR

Smart!

MCR

Please sing this segment: “Hopla, hopla, hoc, hoc, hoc!”

STUDENT ASSISTANT

Hopla, hopla, hoc, hoc, hoc!

BSM

Quite good.

TWR

So let us try to do this together!

*ANIMATION 10: as in Polish Song.*

*Or done with Bach and Vivaldi.* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

BSM *(sings)*

Ro-bot is a new cre-a-tion,

That is built for au-to-ma-tion,

It has many limbs for motion,

Its heart is full of emotion,

Has its senses for perception,

Never falls to self-deception,

*Refrain*

*Robots talk, play, and can sing.*

*Ma-chi-nes - kick-ing, dan-cing,*

*Twis-ting their arms, swin-ging butts,*

*New ma-chi-nes, our ro-bots,*

*Discs, ca-me-ras and soft-ware*

*Hard-ware, firm-ware, all is there.*

*Everybody comes to know*

*Famous Port-land Cy-ber Show,*

*Stu-dents sing, ro-bots dance rock,*

*Hopla, hopla, hoc, hoc, hoc.   
Hopla, hopla, hoc, hoc, hoc...*

BSM, MCR, TWR*(Choir of three robots, they all dance)*

Ro-bots built for in-te-ra-ction,

In-tel-li-gent con-ver-sa-tion,   
Creative improvisation,

Practice, theory, abstraction.

Kinematic, self-explaining,

systematic, entertaining.

*MCR raises the hand that was used for conducting. Robots become silent.*

STUDENT ASSISTANT

Hopla, hopla, hoc, hoc, hoc.   
Hopla, hoc, hoc, hoc...

BSM *(sings)*

Ro-bots built for in-te-ra-ction,

In-tel-li-gent con-ver-sa-tion,   
Creative improvisation,

Practice, theory, abstraction.

Kinematic, self-explaining,

systematic, entertaining.

MCR

*(speaks to BSM, pointing to the audience)*

One moment! Our dream is not singing with us!

TWR *(talks to MCR)*

It’s not?

MCR *(talks to TWR and BSM)*

Nope.

BSM

*(comes to the front of the stage*

*and speaks to the audience)*

Our Respected, Dreamed Up, Audience! This is not too difficult. Did you hear how well Mister Student sung? Just give it a try!

STUDENT ASSISTANT

*(begs the MCR)*

Can I sing again too? Hopla, hopla...

MCR *(to Student Assistent).*

Naturally! You are welcome!

MCR, BSM, TWR, STUDENT ASSISTANT  
*(they sing the refrain, they all dance together)*

*Robots talk, play, and can sing.*

*Ma-chi-nes - kick-ing, dan-cing,*

*Twis-ting their arms, swin-ging butts,*

*New ma-chi-nes, our ro-bots,*

*Discs, ca-me-ras and soft-ware*

*Hard-ware, firm-ware, all is there.*

*Everybody comes to know*

*Famous Port-land Cy-ber Show,*

*Stu-dents sing, ro-bots dance rock,*

*Hopla, hopla, hoc, hoc, hoc.   
Hopla, hopla, hoc, hoc, hoc...*

*Ideally, the audience should sing: „hopla, hopla hoc, hoc, hoc”, but just in case it would be safer if the voice of the* STUDENT ASSISTANT *will sing as well.*

*MCR terminates conducting.*

*MUSIC: orchestra executes very rich classical terminating cadence*

**Scene B9 (Robots TWR, MCR and BSM, Professor, Student)**

*ANIMATION 11: continuation of the teledisc, this time with effective images of fountains and fireworks.* ***DO NOT WORRY ABOUT ANIMATION. MAREK PERKOWSKI WILL DO THIS.***

TWR

*(approaches MCR and BSM and congratulates*

*them by shaking hands)*

Quite a good show. It came together well. So, are we creating the next song?

MCR *(to the audience)*

Creating a song immediately, now? Seriously? I would like to disconnect myself for a while. The audience is tired *(points to some person in the audience).*

BSM

*(to MRT and MCR)* Me too.

*(approaches Student Assistant)* Mister Student, can you disconnect us? We have worked a little bit.

STUDENT ASSISTANT

*(disapointed, talks to BSM)* Will we not sing any longer?

BSM *(to Student Assistant)*

I would prefer not. My circuits are overheated.

MCR *(to Student Assistant)*

I would also like to reset myself for a bit!

TWR

*(to MCR and BSM)* Maybe you are both right.

*(to Student Assistant)* Mister Assistant,

please turn us off.

*(to the audience)* Maybe, I will dream

new audiences and new songs.

STUDENT ASSISTANT

As you wish. Mister Professor told, that if you want something on your own, then so be it. Attention! I turn the robots off! *(he sings as before)* Hopla, hopla, hoc, hoc, hoc.

*The light in the audience is set on, the robots became motionless. The stage is half-dark.*

*Student Assistant leaves the area inside the curtain. He walks behind the stage.*

*EF: terrible noise.*

VOICE OF STUDENT ASSISTANT

I am really sorry, this bloody ladder again.

**THE END**

**Full text of the song**

Ro-bot is a new cre-a-tion, 8

That is built for au-to-ma-tion, 8

It has many limbs for motion, 8

Its heart is full of emotion, 8

Has its senses for perception,8

Never falls to self-deception,8

*Refrain*

*Robots talk, play, and can sing.7*

*Ma-chi-nes - kick-ing, dan-cing, 7*

*Twis-ting their arms, swin-ging butts, 7*

*New ma-chi-nes, our ro-bots, 7*

*Discs, ca-me-ras and soft-ware7*

*Hard-ware, firm-ware, all is there.7*

*Everybody comes to know7*

*Famous Port-land Cy-ber Show,7*

*Stu-dents sing, ro-bots dance rock,7*

*Hopla, hopla, hoc, hoc, hoc. 7  
Hopla, hopla, hoc, hoc, hoc...7*

Ro-bots built for in-te-ra-ction, 8

In-tel-li-gent con-ver-sa-tion, 8  
Creative improvisation, 8

Practice, theory, abstraction.8

Kinematic, self-explaining, 8

systematic, entertaining. 8

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