

MSX Computer & Club Webmagazine

About MCCW

MCCW is the first MSX webzine. It is made by volunteers. It is the continuation of MSX Computer & Club Magazine.

Editor in chief

Manuel Bilderbeek

Technical stuff

Maarten ter Huurne, Manuel Bilderbeek

Layout

MCCM (Frank H. Druijff *et al*), Manuel Bilderbeek, Maarten ter Huurne, Arjan Steenberg, Laurens Holst, Albert Beevendorp

Permanent editors

Manuel Bilderbeek, Albert Beevendorp, Laurens Holst, Antti Silvast, Maarten van Strien, Bas Wijnen, Wammes Witkop, Frank H. Druijff

Other contributors to this issue

The Matra Corporation

Thanks to

Maarten ter Huurne, Geert Josten & Egon Willighagen, Frank H. Druijff, Wammes Witkop, Collin van Ginkel, Albert Beevendorp

Handing in material

Articles or other material can be sent to us, preferably by e-mail: mccw@aktu.nl.

[Phoenix? Nah...](#)

The introduction to this new Webmagazine! (Note: the title has nothing to do with the project Phoenix...)

Manuel Bilderbeek

[The birth of MCCW](#)

Your editor in chief will tell you how we got to MCCW. Discover the *real* story behind MCCW and also learn something about the history of its parent(s). Thrill and suspense await you! Especially if you are not familiar with the Dutch MSX magazine scene...

Manuel Bilderbeek

[The wolf and the seven notes](#)

In this new course Maarten will try to be a helpdesk for composers. He helps you to solve any musical problem. Not only concerning compositions, but also for specific sounddesign.

Maarten van Strien

[De Maiskoek/Bits and Pieces](#)

Short news, small advertisements and the column of Parcellus can be found here.

[Linking a TI-83 to an MSX](#)

Would you like to have your TI-83 to communicate with your MSX? Let Laurens Holst tell you how to do this in a very easy and cheap way.

Laurens Holst

[The MSX World Expo '99 report](#)

In this article the Spanish MSX group Matra Corporation, consisting of Miss Z-0, Madonna Mark Two and S.T.A.R., tells you about their visit to the Japanese MSX fair MSX World Expo '99. The article was originally written in Spanish by Miss Z-0, but was 'rush-translated' by Madonna Mark Two.

Miss Z-0/Madonna Mark Two

[MSX-Kanji revealed](#)

Finally a clear explanation of all the hidden Kanji-features of our MSX system. Find out what your plain MSX2 is capable of! Things you had never expected...

Albert Beevendorp

[Wammes' kolom](#) [nl]

Wammes vertelt wat er allemaal met je kan gebeuren op die o zo bekende rommelmarkten...

Wammes Witkop

[23 steps to high resolution on MSX1](#)

So you thought the MSX1 screenmodes are useless? Especially for cool stuff as demo's? Let Antti Silvast of Bandwagon change your opinion about that! Part one of a big series!

Antti Silvast

[Nawoord](#) [nl]

Een nawoord van Frank, die de zaken nog even op zijn manier wil toelichten.

Frank H. Druiff

previous:

[\[nl\] Nawoord](#)

MSX Computer & Club Webmagazine
issue 91, January/February 2000

next:

[Phoenix? Nah...](#)

Phoenix? Nah...

Welcome to the first web edition of MSX Computer & Club Magazine! Since you are reading the English version of the preface to this edition, it is possible that you are not Dutch. So it might also be the case that you don't even know MSX Computer & Club Magazine. If that is true, it might be interesting to read my article called The birth of MCCW. This may also be interesting for the other readers!

Okay, now there is MCCW, but we are of course very much dependent on the number of articles we get. And in these days, it is quite hard to gather enough articles for in a magazine. But the difference is now that the magazine has become international, so we can also use articles from foreign authors. These articles should be in English of course, since that is the most international language. And of course, with this medium which enables the entire world to read our magazine, we hope that also a lot of non-Dutch people will be reading our Webmagazine.

It may be a bit hard to get used to for the MCCM readers, so we have in this issue also Dutch versions of some articles. And some parts — like Wammes' kolom, a personal column of Wammes Witkop — are still Dutch-only or mixed, like the 'Maiskoek', which we will call 'Bits and Pieces' for now.

Since this Webmagazine is really a continuation of MCCM, we decided to start with number 91, so continuing the numbering of MCCM. Other changes due to the fact that this magazine is not printed anymore are the use of more colour — which is now priced the same as greyscale! — links and a slightly modified layout. The layout could of course not become the same as in MCCM; the World Wide Web language HTML has its limitations. One of them is that words can not be broken and hyphenated at the end of a line. This sometimes results in sloppy-looking paragraphs. But we have tried to combine the old MCCM layout with the best of HTML.

There is more you need to know. We are still looking for — either permanent or not — authors! So, if you have something interesting to write, please mail me! Note that you can also send us small news-messages for the 'Maiskoek' — preferable on MSX — and small advertisements for the same page.

Okay, nice, a magazine, but how long will this one stand? Frankly, we don't know. Ofcourse we can't continue if we do not receive publishable material. We are honest: there is only a small MSX community left, so there might be a day on which we totally lack articles and have to stop! So, this Webmagazine is just an experiment. We will try to make last at least this year — we still have to decide how many issues will appear per year, but the next one will probably be released just before the Tilburg fair — and then evaluate if we should continue or not. In case we will not continue, we will make a final issue with all the articles we still had left. But then, MSX must be *really* dead.

So, our planning is the we have the second issue released just before Tilburg, the third issue between Tilburg and the summer holidays. We also want to release one around the Zandvoort/Bussum fair and maybe another one. When making this planning we *did* assume we will get response and articles, especially after Tilburg! If this appears to be not the case, the chance of MCCW continuing next year will be a lot smaller.

Given that there aren't so many authors left and new products to write about we want to make sure there are still articles in the next issue, you should not expect the amount of articles you were used to in MCCM. We decided that a small number of good articles is better than a larger number of articles now which leaves us with nothing but poor quality for the second issue...

But, what *can* you expect from this issue? Well, we have a couple of new series, a fair-report and some pages you can know from MCCM. I'd say: go see for yourself!

Of course we worked very hard on the layout and articles. If you have any comments or suggestions, you can always mail them to me or the specific authors. Maybe we will publish some of the e-mails, if they appear to be useful.

Oh, and one last thing: I hope you noticed that it is not Frank H. Drijff who is writing this! Frank made me the new editor in chief of MCCW. But of course I want to give him the opportunity to tell what he wants to tell you. That's why you can read also a preface from him, but it is called Nawoord and is in Dutch. :-)

So, I hope you will enjoy MCCW!

PS: I have to thank a number of persons for making this possible, see also the editors list on the contents page. First of all, Frank and Wammes, for their support and help. Second, Maarten ter Huurne, who has been working very hard on the XSLT and shell scripts — yes, MCCW is almost fully automatically generated with the help of XML-conversion and shell scripts! — which made the navigation of MCCW possible. Further I'd like to thank Laurens Holst, Arjan Steenbergen, Arnaud de Klerk, Albert Beevendorp and all the others that gave me very useful comments and hints on the layout. Also thanks to Geert Josten and Egon Willighagen who introduced me to XSLT. And of course, my gratitude goes to all the authors of the articles in this and future issues!

PS2: we did our best to let MCCW work on every possible web browser. It is possible though, that some things will not function as intended on your specific browser. Things might be better if you use at least an 800×600 size for your browserwindow and 16 bit colourdepth. We at least tested it for those specifications. If there are big troubles, also contact us, please! One of the things that are really hard to implement is fonts. Fonts are different on every machine and OS. So on some machines the non-proportional fonts may appear much too small and on others they look perfect. We apologise for this; there's nothing we can do to prevent it. One of the problems is that the 'kolom' may not appear as we intended in Netscape 3.01 for Unix and that for some pages you have to do a Reload to let the pictures appear in the right way. Therefore, we recommend to use browsers of version 4 and higher.

Manuel Bilderbeek

The birth of MCCW

Your editor in chief will tell you how we got to MCCW. Discover the real story behind MCCW and also learn something about the history of its parent(s). Thrill and suspense await you! Especially if you are not familiar with the Dutch MSX magazine scene...

Manuel Bilderbeek

Directory

[Listings...](#)

[The other magazine](#)

[The merge](#)

[The end of MCCM
MCCW!](#)

References

1. <http://www.mccm.hetlab.tk/>

In the beginning... there was MSX Computer Magazine. One of the first MSX magazines in The Netherlands. I am writing 1985. After about 22 issues, they included pc-support, changing the name to MSX/MS-DOS Computer Magazine. But they were not really satisfied, so they changed it back in issue 36, to MSX Computer Magazine. The editor in chief of MCM — as it is often referred to — since issue 8 or so, is called Wammes Witkop. He has played an important role of course in MCM history.

Listings...

A funny detail is that in the first issue of MCM Wammes had to make some letters up for in the mail-page. He told me he typed those letters and other articles on a Commodore 64... As I said above, the first 8 issues or so, Wammes was not the editor in chief, but the program-editor. He was responsible for all the programs that were published in the magazine. At that time people liked typing those programs over to extend their program collection. Later he switched positions with Ronald Blankenstein, the editor in chief.

There's by the way a nice story about these listings in the time of Wammes Witkop being the program editor. It illustrates that at that time, people indeed *really* liked typing over those listings! The story goes as follows.

“The gentleman suddenly stood next to Wammes! He had just ringed at the door of the publishing company and was sent through to the old kitchen on the first floor, where the MCM had its office. The man wanted to talk to Wammes about a remark he made in a previous issue: ‘We always have a lot more programs sent to us by readers that we can ever publish.’ Well, this man was very disappointed... He’d like to have more programs! Wammes told him that it would be an almost impossible job to type over listings without the use of the ICP, the check-program of MCM; he would get terribly stuck in all kinds of errors! The published programs had all been checked and optimized for readability: adding spaces, indentation, that kind of things. But the man wouldn’t listen! And above all, he wanted to type them over, he didn’t want them on disk or tape! So what do you do then?

... One hour later he left as a very happy man... He was carrying a big load of printing paper. The MCM staff just printed about 30 raw listings for him. Programs that were not good enough for publishing.

Wammes never heard again of this man. We assume he is still typing and above all: finding all the errors...”

The other magazine

But in the same period, a group of members of the international DAI-club also started a magazine, called MSX Club Magazine. The first 21 issues or so are only for the members of the Club. After this issue the magazine is also sold in the shops. The Dutch — he had a Belgian colleague — editor in chief of MSX Club Magazine — which was *not* referred to as MCM but as Clubmagazine; a relief for the Dutch MCM! — is Frank H. Druijff. The funny thing is that the MSX Club Magazine was hardly ever mentioned in the MCM, because Wammes thought he shouldn’t ‘advertise’ for free for other magazines. MSX Club Magazine was never really commercial. MCM was. When MCM had reached issue 57 they realised they could not continue with the magazine on a commercial basis. MSX Club Magazine also experienced the decreasing interest for MSX computers, so something should change.

The merge

The result was that MSX Computer Magazine and MSX Club Magazine merged to MSX Computer & Club Magazine in 1993; Frank H. Druijff became the editor in chief and Wammes Witkop became the publisher. It was called MCCM and was on a non-profit basis. In this way the spirit of both magazines could live on for a couple of years. Wammes Witkop was and is by the way not only the publisher of MCCM, but also of another couple of magazines, of which PC-Active is the most well known one; one of the biggest pc-magazines in The Netherlands. They agreed to continue with issue number 58/45, the number the next MCM would have had if they wouldn’t have merged. After this issue they continued with only the first number.

The end of MCCM

As we all know, the interest in MSX decreased and decreased even more. At some point MCCM stopped being sold in the shops and became a subscribers-only magazine (again). It could go on for a while again. When reaching number 78 — I think — the layout was changed for the last time — it changed in the merge, of course! It was a mix of both old layouts — and that’s also the layout these pages were based on.

But, after a while, the expenses increased and the number of articles decreased so much, that Frank and Wammes had to decide to lower the frequency from eight issues per year to six issues per year. Otherwise there was not enough quality per issue. They’d rather have less issues in the same quality than giving up quality standards to get the same number of issues.

In the end the magazine became so expensive for Wammes Witkop, that he had to decide to stop publishing the magazine. For all exclusive subscribers who stayed with MCCM until the end — issue 90 — there was a special surprise: Millennium. A set of two cd’s full of legal MSX software, pictures and other interesting things. This was in the end of 1997 and then the final professional MSX magazine in the Netherlands was gone.

MCCW!

A long time no-one ever heard about MCCM anymore, except for one or two updates of its website — see [1] — on which there was support for the cd-set, the MSX4PC emulator — a product of MCCM — and some other things. The editor of this website simply didn't have enough time to keep it updated. Was this the MCCW Frank was talking about in MCCM number 90?

Then, in 1999, after some e-mails to Frank H. Druijff, we decided something should change. I offered to help them with the website, together with some other people like Arnaud de Klerk. Wammes, Frank, Arnaud and I made some agreements at the bar on the International MSX Fair in Tilburg that year. But, due to some personal problems of Arnaud — e.g., he was moving to a new house — and a lack of time we could only update the linklist of the site. Frank was not satisfied of course — and so did he let me know on the Bussum meeting last year! — and neither were Arnaud and I. Then I had an idea: why not continue MCCM in a web-format? This idea was accepted enthusiastically by Frank and Wammes, but only if I — and the other members of the MCCW staff — could guarantee quality and continuity. So we started gathering texts and designing the website. And here is the result: the web version of MCCM, now called MCCW: MSX Computer & Club Webmagazine!

Don't think this was an easy job, though! We have been working really hard to get it all done. You could/can read more about it in the Preface. Okay, I hope you liked this little story. Now go ahead and read this Webmagazine's first issue!

[previous:
Phoenix? Nah...](#)

MSX Computer & Club Webmagazine
issue 91, January/February 2000

[next:
The wolf and the seven notes](#)

The wolf and the seven notes

This course — when MCCW continues of course — serves as a helpdesk for composers to get rid of any musical problem. Not for composition only, also for specific sounddesign.

Let me introduce myself: I'm Maarten van Strien, in my early MSX days crawling around as Wolf in the dark cold dungeons of Fuzzy Logic, making MB-Muzax 2 & 3. Currently I'm studying Music-Technology in Hilversum and working as sounddesigner, composer and softsynth-coder (Ixalance) for an internet-technology company in Maarssen, The Netherlands, see [1].

The deal is this: I discuss several subjects *or* I answer *your* questions — which is enough material for an article —, ofcourse this means that there have to be questions/reactions/discussions. These questions can be anything related with music, like: 'How do I compose for strings?' or 'We're making an introdemo for a game we're making, what kind of music fits best?'.

Another deal is this: I give some sort of homework! I discuss the contributions here. But, as stated before, there have to contributions! The same goes for the rest of the MCCW articles. Without interaction from readers, MCCW will die very soon...

Maarten van Strien

- Directory
- [Sounddesign](#)
- [Homework](#)

References

- <http://www.gizmozone.com>
- <http://www.filmtracks.com>

Sounddesign

There are two kinds of sounddesign. The first one is synthesizing sounds with a synth-model, for example achieving a fat rich sound with FM synthesis. The basic need for this is a good set of ears! You have to decide what sounds can and cannot be realized with the synth-model you're using. The problem with midi-files played on an FM-model, is that you try to achieve a piano sound from only one FM voice, which is not really possible. — I have heard of a sounddesigner at my study who got close to a real piano with FM, but then again: he used six operators on a real DX7. — This all does *not* mean that FM is worthless crap, it's just that you have to use FM for typical FM sounds only... after all: we're talking about FM! For pianos, use a sampler. Yamaha released the FS1r synth a year ago: a great — cheap! — synth with eight operators and formant shaping to simulate the human voice. FM is not dead at all!

The second type is sounddesign for film (or demo's for RPG games). Nice examples of sounddesign are: Bladerunner (Vangelis), Aliens (James Horner), Saving Private Ryan (John Williams). TV-commercials are even better examples with stunning sounddesign. It's useful to define the global sounddesign *before* you start composing. This gives you a uniform sound in your game. If you're making a science-fiction game, it's a good idea to make music like 'Aliens'. It isn't necessary to make conventional music only, the so called 'soundscapes' also come in handy for some parts. A soundscape is a piece of noise which is based on the colours of sound themself and not really on harmony and rhythm, like conventional music. Most people regard soundscapes as modern art (and don't like it at all :). When I'm talking about sounddesign for film, I'm talking about common action/thriller music. Aliens for example consists of dissonant harmonies, percussion hits, sound effects — synthetic sound design —, double basses contrasting with high violins playing tremolo, and much more. Soundscapes in movies are not only a must for several scenes, they are also quite easy to make. After all, you don't need to be good in writing good melodic themes, often the bottleneck of a good composition. For these cases, a melodic theme would rip away the attention of the viewer, since the story is the important part. I'll come back to this in a future article.

Homework

I would like to hear sounddesign from you, next time. Some director made — this is fiction ofcourse... — an SF-movie. He wants you to make the music and to start with, the intro only. Below you will find a timing-table. Note: stay to this timing! Never say: 'I can't sync well with Moonblaster' A director isn't interested in your problems: if you can't deliver, he picks someone else who can!

| Timing-table SF-movie | | |
|-----------------------|-------|---|
| Time (min.sec) | type | description |
| 00.00 | start | black screen |
| 00.05 | text1 | MCCW pictures presents |
| 00.08 | text2 | Bill Gates |
| 00.11 | text3 | Sigourney Witkop |
| 00.14 | text4 | Mr. Piet |
| 00.17 | text5 | 'Alien planet' (the title!) |
| 00.22 | movie | floating gently past a starry sky on the background |
| 00.45 | movie | fade in: planet far away, zooming in |
| 01.10 | movie | zoomed in to planet, screenwide |
| 01.12 | movie | screen faded to white |
| 01.16 | movie | white screen fades to black |
| 01.17 | end | ... |

A standard storyline as you see... The choice of sounddesign is free (soundscape, melodical etc.) but once you've chosen one, stay to that! How you make it is your problem, you can use the normal MSX chips like FM-Pac, MSX-Audio or OPL4. Send it — MP3 would really be the most convenient format — to me (boor@shortcut.nl).

This kind of homework is what you can expect in my study. These articles save you a lot of money if you had ideas to study something like this too... ;)

For more information about filmmusic and its composers, check out [2].

See you next time...

previous:
[The birth of MCCW](#)

MSX Computer & Club Webmagazine
issue 91, January/February 2000

next:
[De Maiskoek/Bits and Pieces](#)

Note: This article contains text in more than one language.



Page for computer news in
general and MSX news in particular

De Maiskoek/ Bits and Pieces

Overgang

Paus Johannes I voerde in 526 de jaartelling in die gebaseerd was op de Juliaanse kalender. Hij liet door Dionysius Exiguus zo nauwkeurig als toen mogelijk was de geboortedatum van Jesus Christus bepalen. De eerste dag in die jaartelling was 1 januari ... 1. Nogal logisch omdat het getal nul in die tijd nog niet bekend was. Dat werd pas rond het jaar 600 — in onze telling — in Voor-Indië ingevoerd. In de toen gehanteerde Romeinse cijfers komt dan ook geen symbool voor nul voor. Het jaar vóór 1 nC is dan ook 1 vC. Iemand die werd geboren in 20 vC en net na zijn verjaardag in 35 nC stierf is dan ook iets meer dan 54 jaar oud geworden. Waarom wel de namen van de maanden deze aanpassing hebben overleefd is niet bekend, temeer daar zij toch voor een deel afkomstig waren van niet-christelijke (half)goden. Het cijfer nul werd nog veel later in het tweede deel van de middeleeuwen ingevoerd.

Het bekende 'De herdertjes lagen bij nachte...' heeft ook al een vreemd eind: '...het liep tegen het nieuwe jaar.' Vreemd, omdat de Joodse jaartelling heel anders is als de Juliaanse. Die telde trouwens helemaal niet, maar mat alleen de jaren. Dat laatste maakt dat die 'songtext' toch weer verdedigbaar is. Dionysius zat er echter — naar nu wordt aangenomen — enkele jaren naast. Hoe tegenstrijdig dat ook mag klinken, maar Jesus werd vermoedelijk in 3, 4 of 7 vC geboren. En als alles destijds goed was gegaan leefden wij nu in 2002, 2003 of 2006.

Compaq pc runs on 1 GigaHertz

On the Consumer Electronics Show (CES) in the US, Compaq showed a prototype of a pc running on 1000 MHz clockfrequency. The CPU is AMD's Athlon, equipped with a special cooling-mechanism, developed by the American company Kryotech. The active cooling module will keep the processor at a low temperature. This will benefit the speed of the system and prevent it from burning down.

IBM sets world record patenting

For the seventh year in a row IBM now precedes the hall of fame of most inventive companies. Big Blue registered the record of 2756 patents in the US, last year. Nine hundred of those concerned software specific for e-commerce. In second place was NEC, which requested a patent for more than 1800 inventions. IBM patented more than 15000 inventions in the last ten years, three times as much as in the eighties. According to the US Patent Office which is responsible for the registrations, the number of patents for software and company-processes has risen explosively the last few years. More over, the intellectual ownership of e-commerce processes resulted in several conflicts. For example, Amazon sewed their competitor Barnes and Nobel, because it claimed they had stolen an invention for storing creditcard-data. IBM says it does not uses the patents to shield the technology for their competitors. On the contrary, the company received more than one billion dollar of licence-fees last year.

New game of Umax

More ICs sold

According to the market investigator Dataquest, there have been sold 17.6 percent more ICs last year, globally. Intel remains by far the biggest one on the semiconductormarket. Motorola was the only company that sold less ICs last year.

17 year old millionaire after floating site to Stock-Exchange

The 17 year old Benjamin Cohen from the UK is floating his website to the Stock-Exchange for starting companies. The floating is expected to generate millions of pounds. The current value is estimated to be fifty billion pounds. Cohen has 10 percent of the shares, which is more than enough for a financially easy youth, midlife and old age. Cohen started the site less than a year ago. It contains news about the Jewish Community in the UK. The initial investments were less than a few hundred Euro's. Internet gives a chance to very young people to become rich. Another example is the site of the 14 year old Dutch boy Ben Woldring. His very successful site '[bellen.nl](#)' compares the rates of the different telecom-operators in The Netherlands. 1500 people visit his site every day.

Fastest Internet in the Netherlands

The Netherlands will soon have the fastest Internet of the world. This net will arise when the universities will be connected to the Gigaport project, which gives them a bandwidth of 2.5 Gb/s. Next year already, this bandwidth will be extended to 10 Gb/s. In 2002 the project will be completed with a bandwidth of 20 Gb/s. The speed on the backbone will grow in three years

Paus Gregorius XIII heeft de Johanneskalender in 1582 aangepast voor de 'verkeerde' jaarlengte door per pauselijk dekreet op 4 oktober 1582 15 oktober 1582 te laten volgen. Niet iedereen was daar blij mee en tot in deze eeuw bleef men de oude jaren volgen. Vandaar dat Jacquel Brel in 'Nathalie' ook zingt over de 'revolution d'Octobre' als hij de novemberrevolutie in Rusland bedoelt. De jaarlengte zelf paste Gregorius ook aan. In de Juliaanse kalender was er eens in vier jaar een schrikkeljaar. Maar dat is iets te veel van het goede. Gregorius bepaalde dat er geen schrikkeljaar zou zijn als het jaartal deelbaar was door honderd, maar weer wel als het jaartal deelbaar was door vierhonderd. Jammergenoeg bepaalde hij niet dat er weer geen schrikkeljaar zou zijn als het jaartal deelbaar was door vierduizend. Nu zitten we alweer een dag fout rond het jaar 38000...

In computer kent men de millenniumbug, het probleem van de datumnotatie met alleen de laatste twee cijfers. Een schitterend voorbeeld van onzinnige terminologie. In de eerste plaats is het door die twee cijfers geen millenniumprobleem, maar een eeuwprobleem en in de tweede plaats krijgt men het probleem bij aanvang van het laatste jaar van dit millennium en niet pas in het volgende. Had men destijds besloten overal het jaar met vier cijfers te noteren had men het probleem alleen maar voor zich uit geschoven en waren de problemen gekomen bij de overgang van 9999 naar 10000... Als de naamgevingsblunders worden doorgetrokken zou dat dan een decentiumluis zijn.

Om een lang verhaal niet nog langer te maken: de voorbije jaarwisseling was een bijzondere: ik kon er een stukje over schrijven bijvoorbeeld. Het derde millennium is echter of al een paar jaar bezig — Jezus Christus is ruim 2000 jaar geleden geboren — of begint op 1 januari 2001. Bewaar uw millenniumwijn dus nog even.

Parcellus

I/O

INPUT

Who has some cheap MSX stuff for sale/trade? Please mail me! manuel@msxnet.org. You can also see what I already have on [my homepage!](#)

Gevraagd: Orginele F1-Spirit. (werkend). Niet te duur. d-fader@dds.nl

OUTPUT

For sale: Sony HBI-232 (MSX standard RS-232C interface), without casing. Works fine. EUR 10/DFL 22,- + posting.

PGielen@zonnet.nl

MSX stuff for sale, see [my homepage!](#)

CALL

Umax — Peter Meulendijks and others — will release a new RPG game through the Sunrise Games Subscription soon. The game is called "Realms of Adventure". They used an enhanced version of the Pumpkin Adventure 3 game engine. Enhancements are nicer fonts, animations during battle and some more. In this game there are special quests you have to do. There is also active dialog in the game, you have to make decisions which have a big influence on the story. The idea is to make this a continuing story game, i.e. first you get one disk with the manual — for about 17 NLG, Peter told us — and after a while a second part is finished with more quests. The second part can as well consist out of more disks too. There can be well up to 26 parts... So if they make this number of parts, you never have to be bored again.

For a Games Subscription, contact Rob Hiep of Sunrise: rhiep@msx.ch. For more information about the new game or other Umax software — also for hints! — contact Peter Meulendijks:

PeterMilldyke@hetnet.nl.

Tilburg 2000!

This year there will be another MSX (and pc) Meeting in Tilburg, organised by the [Computer Gebruikers Vereniging \(CGV\)](#)! It will be held on Saturday 15th of April 2000, from 10.00 until 16.00. Admission fee is fl 2,50. The address is as last year:

Wijkcentrum De Schans

De Schans 123

Tilburg (noord/north)

The Netherlands

It can be easily reached via bus-line 44-45 to Tilbrug-North, you'll have to get out at the "Vlashoflaan/Griegstraat" busstop.

For more information about this — for example: how to reserve a booth! — or a membership of the CGV, contact them via e-mail:

cgv@xs4all.nl or via snailmail:

Bartokstraat 196

5011 JD Tilburg

The Netherlands

Telephone: +31 ((0)13) 4560668

If possible, we will be there. You too? (We certainly hope so!)

New UZIX version with TCP/IP

We know for a while know that Adriano Camargo Rodriguez da Cunha from Brazil is working on a UNIX-implementation for MSX. This project looks very promising. The newest version — 0.1.5. at this moment — now also supports TCP/IP! He has already implemented programs as Telnet, Finger and Ping. To let it work, you need a pc with Linux and an MSX with an RS232C port. The whole kernel is now only 32 kB, which is the maximum at this moment. This limits the functionality a little bit. Adriano is planning on moving on to a 48 kB kernel, but he first wants to have debugged the smaller one. As any UNIX system, it supports multitasking and some other handy stuff. The current version only runs from diskette and with MegaSCSI also from harddisk with EP. The distribution includes several utilities — including a msx-dos emulator — manual pages and the shell. It runs on any MSX2 or higher. Ofcourse this software is free! Get it at [The Official UZIX page](#). We will keep you informed! Also keep checking the page, since there is a newer version almost every month.

to 80 Gb/s. "That is also a record" says Kees Neggers, the director-general of Surfnet, the company that provides internet to The Netherlands.

The model of Gigaport is unique in the world. The project was started to enable universities and scientific institutes to develop R&D-projects and commercial applications for the net. Companies can also join in these projects in participations.

Recently Teleglobe and Level-3 delivered their first 1×155 Mb/s-connection to the US, which gives Surfnet in total a 466 Mb/s connection to the US. IN a few months this will be 622 Mb/s, as soon as Level-3 and Teleglobe deliver their second 155 Mb/s-connection.

Sunrise RS-232 + IDE combi

Sunrise now has combined their RS-232C interface with their ATA-IDE interface. Both devices have been implemented in the same cartridge. This saves you a slot and also a lot of money! Buying the combined interface is much cheaper than buying both interfaces seperately. This is mainly because of the high price of the housings: in this way you pay relatively more for the electronics itself.

The seperate interfaces are also on stock again now. For more information contact Rob Hiep:

rhiep@msx.ch

Successor of F1 Spirit

From the TeddyWarez crew, we heard they are working on a successor of F1 Spirit. The game will be in screen 4. They already have music — SCC music made with SCC Blaffer NT — and quite some information they needed. They're currently working on a track-editor. For this game they need an appropriate name. You can mail your suggestions to Frederik Boelens:

fboelens@dds.nl

Snout online

Who remembers Snout, the always happy MSX elephant that appeared on the BCF diskmagazine? Anyway, for people who do and for people who don't: check out [own site](#)... It is still in development, but you will certainly recognise him if you are familiar with the BCF disks!

MadriSX 2000

This may be a bit short before it actually happens, but the next MSX fair in Madrid will be on Saturday the 4th of March — oops, because of delay this is indeed too late! — in the cultural centre 'Fernando de los Rios', like last years. The organisers offer all help to foreign visitors, so if you have problems, just contact them via e-mail: replay@meridian.es. On this fair it will be for the first time that a Z380 board is for sale. More information is on [the webpage of MSX Power Replay](#).

ASCII's MSX Magazine returns!

ASCII restarted with MSX Magazine in 1999! This Japanese magazine is ofcourse well known and therefore many people really hated it when they stopped. But now they are back! The first series was quickly sold out and from the second one there are only a few copies left. In the

Gezocht: vaste auteurs voor MCCW!
Wanted: permanent authors for MCCW!
Mail: mccw@aktu.nl.

Lief Maiskoekje zoekt leuke I/O'tjes om samen op het net te staan. Mail even naar mccw@aktu.nl.
If you have some little advertisement for this page, you can mail us at mccw@aktu.nl.

One of our authors is intending to start a programming-course in this magazine. Something like the "Noorder Baken" in MCCM. So if you have questions regarding programming or ideas for subjects, please mail us at mccw@aktu.nl.

Who wants to write an article about an interesting MSX topic for this webmagazine? Please contact us! mccw@aktu.nl

ASCII wants official MSX emulator

ASCII still has special feelings for MSX. But because of the very high financial risks it is very hard to start something new for MSX. Since the current MSX emulators are not perfect yet, ASCII is now examining the possibility to release an official MSX emulator. This one will probably not be based on the MSX roms, like the Playstation emulator Bleem. The popularity of this emulator will be used to look if ASCII should continue with some more MSX projects.

Japanese to Tilburg 2000

K. Ikeda, Yokoi (Frontline), Imamura (SYNTAX), Pen (organiser of MSX World Expo '99) and Masamune (leader of MSX supporters in Nagoya, Japan) are planning to come to the Tilburg MSX fair this year. They will sell MSX Magazine 2 and PoPiPu Magazine. They will also bring a videotape with a message from Kay Nishi for the European MSX users. Yokoi is planning to make a speech about the MSX situation in Japan and the Official ASCII MSX Emulator. He only speaks Japanese, so there will have to be a translator...

Successor to Arranger Gold

Arranger Gold was the name of the first Audio cd produced by Zodiac c.a., it was released at the MSX fair in Tilburg and reactions were very positive. Thanks to the positive responses Zodiac has recently announced to be working on the sequel "Arranger Platinum". Leading member of Zodiac Ruud van de Moosdijk said: "We weren't quite satisfied with Arranger Gold, due to lack of time we had to cut back the number of songs and recording quality was pretty low at sometimes. This sequel will have at least 20 songs instead of 17 and we expect to offer higher quality." Arranger Platinum will be worked on by Ruud van de Moosdijk, Bart Roymans, Jan-Lieuwe Koopmans and Jorrih Schaap, a planned release date has not been mentioned so far.

Casio introduceert polscamera

Op de CES in Amerika de eerste polscamera getoond, de WQV-1. Het is net zo groot als een sportief horloge en kan op zijn 1 MB geheugen maximaal honderd foto's opslaan. De plaatjes kunnen op het schermje worden bekeken en, indien gewenst, worden gewist. Met maar 32 gram zal hij ook nauwelijks hinderlijk zijn, temeer daar hij niet aan de andere pols hoeft omdat hij ook tijd en datum aangeeft. Zelfs een alarmsein is mogelijk en hij is daarnaast nog als stopwatch te gebruiken.

Brit kiest voor pc

Uit een recent onderzoek is gebleken dat de gemiddelde Brit zijn pc verkiest boven tv, chips en... sex. De penetratiegraad in Britse huishoudens is dan ook boven de vijftig procent — vrouwen niet — en ook kent de UK al de meeste grijze — 50+ jaar — surfers. Maar zou het niet zo kunnen zijn dat met de vele seksites die 'arme' Brit toch wel aan zijn trekken komt?

Intel belaagd

meantime they are already working on the second issue.

Erix now public domain

One of the most popular terminal programs for MSX RS-232C is Erix, by Erik Maas. This program used to cost fl 17.50 (about 8 Euro), but it has now become public domain. You can download it from the FUNet MSX FTP archive, [here](#).

Falcom MP3 Archive

There are solid plans to set up a Falcom MP3 Archive. This will be a site just like the [Arranger Homepage](#), but strictly for music from Falcom games. There are now plans to include at least the Ys-games and the Dragonslayer series. The set up will be like the Falcom MIDI sites, but with the difference that it is only with MP3 files of course. The MP3's will be made by the Arranger team, which has recieved the original music — on paper — from Falcom. They also want to see if they can arrange an interview with the JDK Sound Team, Falcom's musical team. More info later...

Artsennet in de fout

Overall waar gewerkt wordt worden fouten gemaakt, maar vooral als het iemands privacy aangaat is men extra snel gepikeerd. Op Artsennet worden vele diensten aangeboden ondermeer discussiegroepen. Een 'normale' discussiegroep is vaak een forum waar zoals uit de naam blijkt wordt gediscussieerd. Maar artsen zullen — menend dat zij tot collega's spreken — misschien voorbeelden aanhalen die sommige patiënten kunnen schaden. Daarom was het erg slordig dat een aantal mensen die helemaal niet tot de discussiegroep hoorden en zelfs geen arts waren toch wat teksten als e-mail kregen toegezonden. Het probleem is momenteel verholpen en Artsennet hoopt herhaling te voorkomen.

Emotionele muis

Als iets weer eens niet goed gaat kunt u maar beter niet afreageren op de muis. Grote kans dat die zich op tijd verstopt, want hij voelt uw emoties aan. IBM is in het kader van een groter project bezig de computer in staat te stellen uw emoties te peilen. Dat gebeurt met sensoren in ondermeer de muis en met het interpreteren van gelaatsuitdrukkingen. IBM is gebleken dat gebruikers hun computer persoonlijkheid toekennen en als hij dan inspeelt op uw gevoelens zal het resultaat een hogere productiviteit zijn en daar is het natuurlijk om begonnen. Aan producten — IBM ziet dat ruim: naast computers ook auto's, telefoons, videospelletjes — wordt nog niet gedacht, maar de theorie wordt alvast bestudeerd.

Illegaal kopiëren

Veel mensen maakten ooit wel eens een kopietje voor eigen gebruik. Wijd verspreid is de mening dat WordPerfect dat destijds oogluikend toeliet, omdat de thuisgebruiker toch nooit die tweeduizend gulden voor zijn thuis-pc zou uitgeven. Ondertussen gebruikte hij het wel en als het bedrijf waar hij werkte ook een

Chipproducent Intel wordt momenteel aan alle kanten belaagd. AMD heeft met zijn Athlon een snellere — bij gelijke kloksnelheid — processor dan Intel met zijn Pentium III. De andere serie van AMD valt de Celeronserie aan. Via doet nog niet veel, maar mikt voornamelijk op de ondersteunende chipsets en moederborden. En sinds kort is er de Crusoe van Transmeta. Deze laatste processor knaagt aan Intels mobiele processoren. Het topmodel, de TM5400 draait op 700 MHz en dat is weer net iets meer dan Intels snelste die 650 MHz haalt. Het bijzondere aan de producten van Transmeta is echter dat ze geen kopieën zijn, maar nieuwe ontwerpen, die echter wel softwarematig x86-programma's kunnen verwerken.

Microsoft wisselt van CEO

Bill Gates is de topman van Microsoft: oprichter en inspirator zegt de romanticus en Chief Executive Officer zegt de zakeman. Maar wat niemand kort geleden nog voor mogelijk hield is toch bewaarheid geworden. Ome Bill heeft de leiding overgedragen aan zijn tweede man en jeugdviend Steve Ballmer. Gates is natuurlijk nog wel de grootste aandeelhouder van Microsoft en blijft wel werken voor het bedrijf. Hij gaat zich echter weer op de software gooien en misschien krijgen we dan nu de muren of de fundering want vensters hebben we al genoeg.

Elke zes seconden een nieuwe GSM

Volgens gegevens van KPN werden in het afgelopen jaar zóveel GSM's verkocht dat het neerkwam op één per zes seconden. Of dat alleen gedurende winkeltijden is of 24 uur per dag werd niet vermeld, maar een ijverig rekenaar zal dit zelf kunnen uitrekenen uit de penetratiegraad die binnen diezelfde tijd toe nam van 21 naar 43 procent. December is natuurlijk de cadeaumaand bij uitstek en Primafoon noteerde 220.000 verkochte mobieltjes in die maand. Het aantal is nu zeven miljoen en nog steeds stijgend en de vermoedelijke grens is twintig (!) miljoen.

tekstverwerker wilde, dan werd dat natuurlijk WP want dat kende men al. Anderen kopieerden het dan op het werk en de werkgever liet dat weer oogluikend toe omdat zijn werknemers dan beter met het product leerden omgaan. Soms werd er trouwens een deal gesloten zodat de thuis-pc goedkoop en legaal — dus handboeken — van WP kon worden voorzien. Iedereen tevreden. Maar sommigen maken het wel bont: bij eBay van de internetveilingen werkte iemand die bij een inval illegale kopie'n van software bleek te bezitten. Ondermeer voor 20 miljoen dollar aan Novell-materiaal. Dat is geen privé-aangelegenheid meer.

Overheid VS naar Corel

Het ministerie van Justitie kan het na alle rechtszaken natuurlijk niet maken zelf Microsoftproducten te gebruiken als daar alternatieven voor zijn. Word heeft nu afgedaan en wordt vervangen door WordPerfect dat momenteel van Corel is. Toch vreemd dat juist het Amerikaanse justitieapparaat een buitenlands — Corel komt uit Canada — product gebruikt. Straks ook Linux nog, om Windows te voorkomen.

...a report...

Linking a TI-83 to an MSX

Would you like to have your TI-83 to communicate with your MSX? Let Laurens Holst tell you how to do this in a very easy and cheap way.

Laurens Holst

Directory

- [Let's get on with it](#)
- [Yes, MSX is cool](#)
- [Software](#)
- [Q & A](#)
- [Where to get](#)

References

1. <http://datax.cjb.net/>
2. <http://www.ticalc.org/>
3. <http://www.ti-files.org/>
4. <http://www.calc.org/>
5. <http://tcpa.calc.org/>

TI-83 specifications

- Z80 processor @ 6 MHz
- 256 kB ram
- 32 kB ram, of which ± 27 kB free
- Display of 96×64, black/white
- Slow display-controller with its own vram

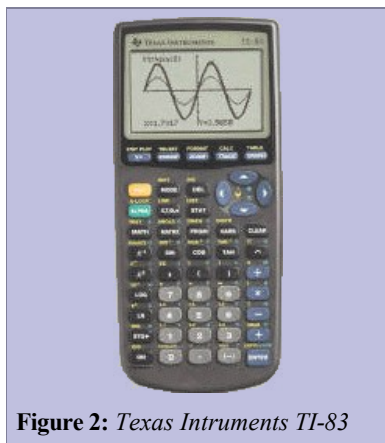


Figure 2: Texas Instruments TI-83

For some time, Texas Instruments has a series of graphical calculators on the market. Those calculators can be linked to a pc by using a special cable. However, Texas Instrument's 'official' cable is very, very expensive, so some amateur users started making their own 'alternative' cables, which require special software, but are much cheaper. Well, if that can be done for pc, then why shouldn't it be possible for MSX?

Let's get on with it

Since I am the proud owner of a TI-83, I started to get to work. The first mission was to construct my own cable especially for MSX, since the pc-cable will not work on MSX because it uses two statusbits for input, while MSX only has one statusbit for input. In addition, the connector is incompatible, so you will need an adapter anyway. However, I modelled it after the TI parallel link for the pc. Well, now the decision, what port should we use? Ofcourse, the most ultimate port in the world of MSX, always easy to reach — well... — yes, the joystick-port! This port can be set to use four pins for input, and three pins for output, and that perfectly fits our wishes, because we only need two input-pins and two output-pins.

Well, with the result of that I started to try sending bytes back and forth. After trying some stuff based on a rom-dump program and the respective C-source for the pc-side program I ultimately succeeded to receive bytes. Being so far, I ofcourse knew quite a lot about this link-cable of the calculator, and I had an idea to simplify my TI 2 MSX cable. I will explain it. A link-cable only has two wires, and the TI can use the same port for both reading and writing. However, a printerport hasn't got pins fit for as well receiving as sending, and that problem was solved using some diodes. But, as you might already know, pins 5 and 6 — the 'firebutton-pins' — of the joystickport can be used for reading as well as writing. A joystick uses the read-function, JoyNet and my first version of the TI2MSX-cable uses the write-function. But what if I just use both at the same time, just like the TI-calculators do... that might just work.

Yes, MSX is cool

Well then, some resoldering, and yes, it works! So the MSX-version of the TI-linkcable now really is so easy to make, it cannot become easier! Because now it has become nothing more than a simple adapter. That is advantage nr. one compared to the pc... The other advantages? Well, on the pc's printerport — and the MSXes as well, by the way —, when it's not used, the pins are enabled by default (=set to 0), which does have its logic by the way, because it indicates the last sent byte was a 0. But if you connect a TI to such a connector, the TI thinks that, since the pin is enabled, a byte is being transmitted, and it will start the transmission protocol. Which will however not get any response and after a few seconds it times out. And that will happen over and over again, which slows down the calculator drastically. However, the outputpins on the MSX's joystickport are, in the standard environment, always disabled (=set to 1), which results in the possibility to link your TI to your MSX whenever you want, without any difficulties. Except when your MSX is off, which is a very bad thing.

Advantage number three of the MSX is that the MSX can ofcourse perfectly fulfill this job, so it would be a shame not to use your MSX for that. In my case for example I have (almost) unlimited access to my MSX, while I have to share the pc, of which the startup-sequence also takes too long, with other family members. And it's ofcourse ideal to switch on your MSX right before you go to school to quickly upload that one game, or make a fast backup.

Software

Uhhh... okay, where were we... Ah, yes, the software. I continued with that — some saw the 'receive'-part working at the Bussum '99 fair —, and ultimately the program TransMSX, downloadable from my homepage [1], came out of it. Now already version 1.2, supporting the TI-82 as well and having very useful options like the use of wildcards or dropping the file-extension (read more about that in the enclosed readme file). It has no nice GUI yet, but it will in version 2.0, which will take a while to finish, because it's quite a lot of work. However, it is definitely useful, because using such a GUI would enable you to easily group or ungroup programs — grouping is putting multiple programs in one file —, protect and unprotect programs and also within a group, merge groups, send a single file from an entire group, send multiple single files or multiple groups, etcetera, etcetera.

Q & A

And now some questions you probably would like to see answered: why aren't the other calculators of TI not supported yet? Well, Texas Instruments has brought multiple types of graphical calculators on the market which can roughly be divided in three groups: first, the series TI-82, TI-83 and TI-83+, fairly cheap calculators for use in high school, with a low-resolution display. Next, there are the TI-85 and TI-86, with more functions and a higher display resolution (however still based on a Z80), and ultimately, the TI-92, TI-92+ and the TI-89, of

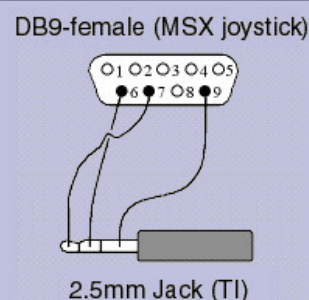


Figure 1: Mind you: a 2.5 mm jack is a tiny little bit smaller than a 'normal' jack used with a headphone. In addition, not all of them fit in a TI-calculator, because the hull often is too wide. Therefore, I recommend you to take your TI with you to the electronics shop and try at location if the jack fits well enough.

which the last one is (almost) equal to a TI-92+ only in a more compact form — like the 8× series — to let it be allowed on exams. It has a lot of functions, also three-dimensional functions, a high-resolution display and a 68000 processor. The later model numbers are — excluding the last case — improvements of the earlier models within the group, and the bios is also built up from the same source with new improvements everytime. Because of that, programs can quite easily be converted to other calculators within the same group, and the link also uses almost the same protocol. As a result of that, the link-software can also be adapted quite easily. However, the high-level protocol of other ‘groups’ of calculators is, although the low-level protocol — used for sending and receiving bytes — is the same, unfortunately, despite the resemblance, not compatible.

But then why doesn't the TI-83+ work yet? The reason for that is that I only have a TI-83, and I can only test my stuff on that. The TI-82 protocol wasn't hard, since the TI-83 protocol is upwards compatible with the TI-82's, and the TI-83 also has some sending-functions with which it ‘simulates’ a TI-82, so that was easy to test (try it yourself, you will see that the files received from one of those functions will get a .82?-extension). However, a TI-83+ has quite some new functions, and also internally a lot has changed, using flashrom as additional memory etc, and since I haven't got any documentation about that yet and no model for testing either, I don't dare to trust it will simply ‘work’.

Where to get

As you probably already knew, or else already have understood, you can also store programs in the 27 kB ram the TI-83 has. Where to get them from? Well, that's an easy question to answer, from the internet! There are a few big, also officially recognized pages with all programs available on it, the most well-known — and best-looking — of them is ticalc.org [2], but don't forget [The TI-Files](#) [3] either, it's a bit ‘underground’, cool! And also visit [Dimension-TI](#) [4], not a very good archive but they have cool contests and good articles. Apart from some casual programmers there are also programming groups, like the [TCPA](#) [5] — TI Calculator Programming Alliance —, of which I am also a member. And ofcourse, not to forget, my homepage, [Grauw @ Ble](#) [1].

Lo, behold, once again (?) the end of this article. Next time I will tell you about my other programs for the TI-83 and the MSX, for example [MSX83Dev](#), a small program with which you can write TI-83 programs on your MSX and convert the code to TI-83 format (.83P), and [MSXNukes](#), an MSX-version of the terribly asocial, unusually destructive program [TINUKE](#), with which you can reset another TI via the linkcable. I will also tell you a little about my TI-83 game-in-development [Angel](#).

the large Japanese MSX fair

The MSX World Expo '99 report

In this article the Spanish MSX group Matra Corporation, consisting of Miss Z-0, Madonna Mark Two and S.T.A.R., tells you about their visit to the Japanese MSX fair MSX World Expo '99. The article was originally written in Spanish by Miss Z-0, but was 'rush-translated' by Madonna Mark Two.

Miss Z-0/Madonna Mark Two

Directory

- [The fair](#)
- [What could be seen](#)
- [Other things](#)
- [Sales stand](#)
- [Conclusion](#)

References

1. <http://matra.cjb.net>
2. <http://www.funet.fi/pub/m...>

Well, after some adventures, two Matra agents — S.T.A.R. & Z-0 — got to cruise overhead to Chiba, Japan, to attend MSX World Expo '99. At first I was supposed to go alone (Z-0) but fearing possible organisation glitches and the risk of losing myself in Japan, S.T.A.R. decided in the last minute to go with me. Frankly, the expectations were no good. Here's an excerpt from a message sent by the organisation:

1. We decide which software/hardware we'll demonstrate or not.
2. We'll try our best to display Matra products, but there is a possibility we'll run out of space. : (
3. All of the sales in MSX World Expo will take place in one concentrated stand. You are not allowed to sell by yourself.
4. We *are* ready to sell Matra products. Please tell me
 1. number of copies (like "40 SBB packages and 50 MAT's") and
 2. their prices

Caution : We will charge 10% of your sales from software/hardware, and 8% of your sales from other goodies (MAT in your case). Rest of the sales (90% of software/hardware and 92% of the goodies) will be yours.

Something pretty apart from conventional fair guidelines. So SBB could be censored, there was a chance to have no stand, I couldn't sell the products by myself and the organization was retaining a percentage of *our* sales.

Luckily, thanks to Takamichi Suzukawa, we could talk with Mr. Pen before the event, who gave us a space in the stand reserved to Spain.

The fair

Sat 22, the very morning. We departed from the hotel — the Keio Plaza Intercontinental, located in the core of Shinjuku — heading for Chiba. The MSX World Expo was to take place in the CIT — Chiba Institute of Technology —, which was also celebrating its annual party.

The entrance was crowded with students offering meals, T-shirts and other 'handcrafted goods' typically found in this kind of events. The expo was being held at classroom 652. It was built to show non-MSX people what the MSX is and how it's spread world wide. So the fair concept was more of a true expo than a user meeting. And it was nicely organised.

The room was divided in five sections: amusement corner, international corner, game corner, repair corner and sales corner. Of course the admission was free.



We were right!



UP'S, performing...

What could be seen

Just a step into the room and there was a funny character, UP'S, surrounded with an army of synths & drum machines and performing his own musical manoeuvres. The show was backed up with MSX turbo R animated video footage shot thru an LCD projector. Every now and then a Gigamix showman was popping up with a Quiz-style game, cheering the crowd up. He was real good at it as everybody was laughing to death!

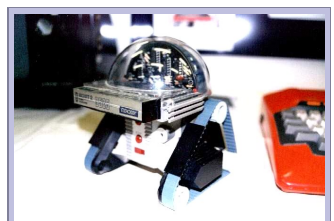
The international corner consisted of several tables with Dutch (!) & Japanese info panels, country flags and several country-specific computer

models & related items.

The expo was headed with a couple of superb devices from Mr. Pen's private collection: a *red* HB-101P and a *slot-mouthed robot*: its mouth accepts a programmable MSX cartridge and it performs all displacement actions absolutely off the computer.

Next, an Arabian MSX with an Arabian keyboard running a *shocking* — and Arabian as well — *holy Koran* cartridge.

Then in the corner, a Korean stand, with three MSX-compatible consoles from Daewoo. Astonishing design, just like crazy SCI-FI flick spaceships.



The robot...

Next we found various fanzine format press, like Popipu, MCCM and our Hnostar, which linked with the Spain stand, where Matra was placed, exposing and tempting people to play Sex Bomb Bunny and Saver's

Kaotika. We asked Manuel Pazos to present some Sonyc copies but unfortunately they never reached Japan due to post service problems.



The slotexpander...

Then it was the Dutch stand, where several demos were played and a Japanese (!) slot expander was shown.

In the other corner there was the Brazil stand, featuring a MSX turbo R linked to another slot expander and a cd-rom which was playing EVAs with Evangelion musics & Ace of Base's 'Happy Nation'.

Finally there was the Japan stand. It was not the usual product avalanche overkill but just two bare computers showing Gigamix's Magical Labyrinth Remix — see Hnostar 42 — and a mobile phone which was

supposed to be connected to a BBS.

Other things

On the central zone there was the amusement area where you could test the games available on the sales stand. First it was Pleasure Hearts, a horizontal scrolling shoot'em-up, and Zone Terra, another shoot'em-up but with vertical scroll. On the rear, a couple of promos: Niwatriss, a complex Tetris clone where pieces are substituted by *birds* — hens, chickens and the like — and an RPG which we forgot to write down the name.

Almost hidden it was the repair corner, where we believe no equipment was actually repaired, as it looked like a kind of a scrapyard, judging by the condition of the machines lying around there. Close to this area, possibly the best of the expo: the most impressive thing I've seen for years: a *true mini drum set* played from a tracker's drum channel. A striker-driven device triggered by a MSX turbo R.



The mini drum set!

The usual wintel brick emulators, and a SEGA Saturn playing Konami's Collection cd were also around here.

Sales stand

Stretching all over the room it was the sales stand, with several and oddly priced products:

| Product | description | price (in ¥) |
|-----------------------------------|--|------------------------|
| Syntax's NV's | disk fanzine | 800-1000 |
| Orange Heads | music compilations | 1500 |
| T-shirts with Den Yu Land imagery | '1:144 SCALE' & the best 'SYNTAX ERROR IN 2000' | 3000-5000 |
| ESE-Factory's MegaSCSI | 256 kB and 1 MB versions (S.T.A.R. bought one of the latter) | 20000 and 35000, resp. |
| EuroLink #4 | European diskmagazine | 800 |
| Heartful | another music cd | 500, tape 300 |
| Sex Bomb Bunny & MSX-E-MAT | from Matra, of course! | ? |
| Pleasure Hearts | | 1500 |
| Zone Terra | ancient game by Quadrivium | 800 |
| DM SYSTEM technical handbook 2 | | 2500 |
| MSX'99 calendar | | 500 |

And then it was the surprising MSX Magazine #1 (800¥). This magazine is edited by Syntax with actual brand/logo permissions from ASCII Corp.

Essentially, that was the expo all over. After the first day there was a debate about the role of ASCII in MSX history/future, and the second day a summary of the fair and a little statement on what it was called: *the revival of the survivor*.

Conclusion

Summing up, an unexpected fair concept, more aimed towards the non-MSX public than to the real user. A good initiative to show people what's the MSX about, making good use of the institute annual party. The best: without doubt the Japanese behaviour. At first they glanced at us distrustfully, but second day, after continuous speech and opinion sharing — thanks to real time translators Bernard, Herve, Takamichi & Ikeda —, they understood Matra is something more than just a visitor group, something bigger than it seems, with ideas and proposals that many people



Syntax error in 2000

liked and accepted enthusiastically.

S.T.A.R.'s exquisite behaviour, with his innate honour and relationship skills, was definitely a major score. The deals arranged with Imahi from Sintax, the bizcards swapping, the present offering and tokens of gratitude

expressed by the Matra agent were reflected by all the presents.

Worst: not that bad, but it was shocking that the organisation was retaining a 10% of the sales profits for a task we could manage ourselves, perhaps — and just perhaps — better than them. And of course, the lack of attention from the organisation to all the messages sent by Matra to confirm assistance. That however has a logical explanation: they don't speak English, so all our messages were hardly understandable for them.

Credits and greetings are not included as I don't want to forget a single person, address or web page. We sincerely thank *all* those who were there. More pictures are in [[1](#)] and [[2](#)]

previous:
[Linking a TI-83 to an MSX](#)

MSX Computer & Club Webmagazine
issue 91, January/February 2000

next:
[MSX-Kanji revealed](#)

the new from Japan is now usable in Europe

MSX-Kanji revealed

As many people may have found out, after the 'import' of the MSX2+ system and/or MSX-DOS 2.20 in Europe we are aware of the Kanji-screens. After my not so small MSX-collection was enriched with a MSX turbo R, the Kanji-screens and the PUT KANJI statement — which can be found in really every MSX2 computer or higher, even the European versions — are more clear to me. Using these Kanji statements many nice things can be done. The first things Kanji enables is printing text onto a graphical screen using simple LOCATE and PRINT statements. However, this rom hides many more nice features, including a conversion system from and to Katakana, Hiragana and Kanji characters.

Albert Beevendorp

Directory

- [Kanji screens](#)
- [Kanji string manipulation](#)
- [Kanji add-ons](#)
- [Kanji in machine language](#)
- [The PUT KANJI statement](#)
- [PUT KANJI in machine language](#)

The Kanji characters are the more complex characters of Hiragana characters which are printed above these Kanji characters on many packages of Japanese games. The Katakana characters are used by Japanese to phonetically write English words. Usually names are written in Katakana characters as well. Hiragana characters are mostly used to create sentences, but the actual translation procedure is unknown to me, so let's keep that to the experts okay? This article just explains the use of both the Kanji screens and PUT KANJI. The Kanji rom is accessible using machine language, so some example sources are implemented.

Kanji screens

The MSX Kanji rom exists out of four Kanji screens and some functions which are very much usable outside of the Kanji screens. There are six statements which enable selection of the Kanji screens. The table "Kanji screens" describes the possible screen modes which can be selected. The CALL statement itself can be abbreviated using an underscore (_), so CALL ANK and _ANK do the exact same thing:

| Kanji screens | | |
|---------------|------------|-------------------------------------|
| Statement | Resolution | Description |
| _KANJI | (64,13) | Character size 8×16 (WIDTH 64 max.) |
| _KANJI0 | (64,13) | Character size 8×16 (WIDTH 64 max.) |
| _KANJI1 | (80,13) | Character size 6×16 (WIDTH 80 max.) |
| _KANJI2 | (64,24) | Interlaced 8×8 (WIDTH 64 max.) |
| _KANJI3 | (80,24) | Interlaced 6×8 (WIDTH 80 max.) |
| _ANK | (80,24) | SCREEN 0 or SCREEN 1 |

After selecting a Kanji screen the keyboard will take the Japanese layout, which is the reason for the confusing non-japanese keyboards. With MSX-DOS 2.20 this was made very clear and there are converted MSX2+ computer which have a reprogrammed version in eprom which let you keep the original keyboard layout. Officially the Kanji rom was designed for the Japanese market which explains the Japanese keyboard layout. MSX-DOS 2.20-Kanji enabled clearing the screen with just a simple CLS. However, the official version of Kanji rom only _CLS enables clearing the screen. A normal CLS would simply give an error. Using _PALETTE (C, R, G, B) even colours can be changed in the Kanji screen. The result is 100% equal to COLOR=(C, R, G, B), but this would mess up part of the screen.

Kanji string manipulation

Next to the eight Kanji screen manipulation statements, ten Kanji string manipulation statements are included. The table "Kanji string manipulations" lists these statements which are explained right thereafter:

| Kanji string manipulations | |
|----------------------------|--|
| Function | Description |
| _AKCNV (A\$, B\$) | Converts an Ank string to a Kanji string. |
| _JIS (A\$, B\$) | Put Jis code of the character in B\$ (obtained using _KNJ) in hexadecimal notation in A\$. |
| _KACNV (A\$, B\$) | Converts a Kanji string to an Ank string. |
| _KEXT (A\$, B\$, A) | Filters characters of the given type A from string B\$ to string A\$. |
| _KINSTR (A, B, A\$, B\$) | Equivalent to A=INSTR (B, A\$, B\$), but designed for the Kanji strings. |
| _KLEN (A, A\$) | Equivalent to A=LEN (A\$), but designed for the Kanji strings. |
| _KMID (A\$, B\$, A, B) | Equivalent to A\$=MID (B\$, A, B), but designed for the Kanji strings. |
| _KNJ (A\$, B\$) | Put the character with Jis code B\$ in A\$. |
| _KTYPE (A, A\$, B) | Returns type of the character on position B of A\$ in A. |
| _SJIS (A\$, B\$) | Put the ascii values of character B\$ (obtained using _KNJ) in hexadecimale notation in A\$. |

Some commands need more explanation and examples in order to show the exact result. It's necessary that you should try some things yourself in order to understand it all. Japanese characters can be viewed if the appropriate support for this is installed or else you would see some meaningless characters.

_KNJ (A\$, B\$) converts the Jis code to a string which can be used to put the character actually on the Kanji screen. In the Japanese manuals all characters are put in Jis code, which is the standard code for every Japanese computer system to display the correct character without its own translation method because of incompatibility. The Jis code is the standard for the Japanese Kanji and all conversions should go through the Jis code. The Jis

code itself is put in B\$. And the result will come in A\$. As an example let's take Jis code "4B62". If we want to put this character on the screen, we should do `_KNJ(A$, "4B62")` and the characters to put the Kanji character onto the screen is put in A\$. The character itself on MSX looks like this: 魔

This Kanji character can be converted back to a Jis code using `_JIS(B$,A$)` and B\$ will have the string "4B62". Using `_SJIS(C$,A$)` will result in the hexadecimal values of the character codes you should print to the screen to display that character: "9682". In this case the character codes are &H96 and &H82. Printing these codes to a Kanji screen would result in the display of the Kanji character. Also a nice feature (and used a lot) is converting a string from Ank string to Kanji string, which results in double width characters on the screen. Less used is the conversion from Kanji string to Ank string (in somehow a less perfect way, as there are many more characters in the Kanji rom and conversion to Ank string is done with just 256 characters).

If we want for us readable text (converted from an Ank string to a Kanji string) printed in double width on a Kanji screen, then use the statement `_AKCNV(A$, "Hello")` and when printing A\$ to the Kanji screen, the text will be printed in double width as the Kanji characters are 16 pixels wide in stead of 8 pixels and on the Kanji screen two positions are used for one character for this purpose. If we want to convert this Kanji string back to an Ank string the statement `_KACNV(B$,A$)` and the result is that B\$ contains the normal "Hello" (in both Ank and Kanji screens). The Katakana and Hiragana characters are smoother after converting from an Ank string to Kanji string, because the Ank characters are 8x8 pixels and Kanji characters are 16x16 pixels which are located in a separate rom: the Jis rom.

Using `_KEXT(A$,B$,A)` it's possible to filter all characters of a given type A from B\$ to A\$. It's possible to combine Ank-type and Kanji-type characters in a single string. If A=0 then all Ank-type characters would be filtered out from B\$ into A\$ and if A=1 then all Kanji-type characters would be filtered out from B\$ into A\$. After this, the length of the string can be determined using `_KLEN(A,A$)` for a particular purpose. You can get the type of a character within a string with `_KTYPE` or you can select a particular part out of it using `_KMID`. Before using one of those statements, you should get the length of the string first as `A=LEN(A$)` will give a different value than `_KLEN(A,A$)` when it contains Kanji-type characters.

`_KTYPE(A,A$,B)` can determine the type of a selected character. The result A will contain the type of character in A\$ on position B. Use `_KLEN` before using `_KTYPE` to stay within the actual length of the string, without getting an error. When A=0, the pointed character is Ank-type or A=1 when it points to a Kanji-type character. `_KMID(A$,B$,A,B)` gets the selected part of the string. `_KMID` detects character-types and reacts accordingly. Use `_KLEN` to determine the length of the string.

Kanji add-ons

In the Kanji mode (using Kanji screens) it's possible to print onto a graphics screen using simple `LOCATE` and `PRINT` statements without opening a file "GRP:". Unfortunately the pixel-type positioning doesn't work with `LOCATE`, so you need to open a "GRP:" file for this and so `PRINT #1` is necessary. At the "introduction" of Kanji in Europe the simple `LOCATE` and `PRINT` statements were used in the MSX2+ demo's which were all equipped with Kanji rom. Even MSX2 computers converted (or expanded) to MSX2+ have a Kanji rom without Jis rom — and with international keyboard layout and character set — so the built-in character set is used in stead, because the Jis rom couldn't be found. The art of removing we would say here.

The key combinations `GRAPH-SELECT` and `CTRL-SPACE` reveal some nice functions. If there is a difference between these two key combinations, I don't know what it exactly is. Both key combinations disable this function. On the last line a cursor is positioned where Japanese characters are entered using phonetic speech (which is called Romaji) and results in hiragana characters. Outside of this function (and the Kanji screens) entering Romaji can be entered using `SHIFT-KANA` and `CAPS-LOCK` acts as a toggle between Hiragana characters (`CAPS-LOCK` off) and Katakana characters (`CAPS-LOCK` on).

While entering text there are some keys with special functions. The cursor keys left and right enable browsing within the typed text. Cursor keys up and down or the space bar enable browsing through a selection of Hiragana to Kanji converted possibilities. The `RETURN`-key transfers the text to the actual screen from the cursor position. The `KANA`-key toggles phonetic speech entry (Romaji) and direct Hiragana entry. `F1` toggles entry using our alphabet, `F2` converts input to Kanji typed Katakana, `F3` converts input to Ank-typed Katakana.

Kanji in machine language

Undoubtly there are more things to do with KANJI using machine language, but only switching Kanji screens, reading the current Kanji screen mode and Kanji driver installation detection are explained now. The Kanji routines are called using the `H.EXTB` just like the DOS2 memory routines and MST's MemMan. The ID-code is put in register D and has value 17 (&H11) and the 'command' is put in register E. Below the three routines in a WB-ASS2 source.

```
ML-listing: KANJI.ASM
;
; KANJI-driver check - BiFi'96/'99
;
; Out: Z-flag set when no driver
;
KNJCHK: LD    A,255
        LD    DE,&H1100    ; D = ID-code, E = Command
        CALL &HFFCA
        INC  A
        RET
;
; Read KANJI-mode - BiFi'96/'99
;
; Out: A=Current KANJI-mode
```

```

; =0 ANK
; =1 KANJI0
; =2 KANJI1
; =3 KANJI2
; =4 KANJI3
;
RD_KNJ: LD DE,&H1100
        JP &HFFCA
;
; Set KANJI-mode - BiFi'96/'99
;
; In: A = KANJI-mode
;
WRTKNJ: LD DE,&H1101
        JP &HFFCA

```

The PUT KANJI statement

Until now this Basic command was very unknown to many European MSX-users, but the fact is, the command is included in every MSX2 rom: PUT KANJI. It was not documented because it gets the character data from the Jis rom and the non-japanese computers don't have a Jis rom. PUT KANJI is a graphical command, which means it's only accessible from within a graphical screen. Even a bios entry is included in the MSX2 subrom to do a PUT KANJI from machine language and it's included in this article. The complete syntax of the statement is:

```

PUT KANJI [STEP] [(X-coordinate,Y-coordinate)], <Jis code> [,<Color>] [,<Logical operation>] [,<Printmode>]

```

Like most graphical commands the optional "STEP" is used to do a relative positioning. Between the brackets the (with STEP relative) coordinates for the character are located. <Jis code> is expected and describes the character to print. Like all Jis codes in this article are in hexadecimal notation the same notation is kept here as well. So if you want to print Jis code "4B62" the Jis code is to be entered like &H4B62 (just for our easy reading and quick reference) in PUT KANJI. <Color> depends on the number of colors for that graphical screen. Like most graphical commands the <Logical operation> is printed in alphanumeric format. At default the <Logical operation> is PSET.

<Printmode> needs some more explanation. There are 3 printmodes (0 to 2) and the table explains most of them:

| PUT KANJI print modes | |
|-----------------------|--------------------------|
| Printmode | Explanation |
| 0 | Complete KANJI character |
| 1 | Print even lines only |
| 2 | Print odd lines only |

Printmode 0 displays the complete Kanji character on the active screen page. This is the defaultmode and is mostly used when there is no interlace necessary. Printmode 1 displays the even lines on the active page. To combine both even and odd lines to the full character the even lines are to be printed on the even numbered page and the odd lines on the odd numbered page using interlace. Remember: screen pages 0 and 1 are connected and screen pages 2 and 3 are connected too. These two examples show the usage of PUT KANJI in Basic. The first example shows the use of printmode 0, the second example print the same text using printmodes 1 and 2:

```

Basic-listing: KANJI1.BAS
10 SCREEN 5: X=60: Y=80: RESTORE
20 READ A$: IF A$<"*" THEN Z=VAL("&H"+A$): GOSUB 40: X=X+16: GOTO 20
30 I$=INPUT$(1): SCREEN 0: END
40 PUT KANJI (X,Y),Z,14,PSET,0: RETURN
50 DATA 234D,2353,2358,2342,2341,2353,2349,2343,*

```

```

Basic-listing: KANJI2.BAS
10 SCREEN 7,,,,3: X=180: Y=100: RESTORE
20 SET PAGE ,1: CLS: SET PAGE 1
30 READ A$: IF A$<"*" THEN Z=VAL("&H"+A$): GOSUB 50: X=X+16: GOTO 30
40 I$=INPUT$(1): SCREEN 0,,,,0: END
50 SET PAGE ,0: PUT KANJI (X,Y),Z,14,PSET,1
60 SET PAGE ,1: PUT KANJI (X,Y),Z,14,PSET,2: RETURN
70 DATA 234D,2353,2358,2342,2341,2353,2349,2343,*

```

The examples above read the Jis code from the DATA statement. It's easier to use the Kanji rom. As described earlier it's possible to convert from Ank-type to Kanji-type and to get the Jis code per character to print using PUT KANJI. The statements used are: _AKCNV, _JIS, _KLEN and _KMID. The examples would be like this after changing some of the code:

```

Basic-listing: KANJI3.BAS
10 SCREEN 5: X=60: Y=80: _AKCNV (A$,"MSXBASIC")
20 _KLEN (M,A$): FOR L=1 TO M: GOSUB 50: GOSUB 40: X=X+16: NEXT L
30 I$=INPUT$(1): SCREEN 0: END
40 PUT KANJI (X,Y),Z,14,PSET,0: RETURN
50 _KMID (B$,A$,L,1): _JIS (C$,B$): Z=VAL("&H"+C$): RETURN

```

Basic-listing: KANJI4.BAS

```
10 SCREEN 7,,,,,3: X=180: Y=100: _AKCNV (A$, "MSXBASIC")
20 SET PAGE ,1: CLS: SET PAGE 1
30 _KLEN (M,A$): FOR L=1 TO M: GOSUB 70: GOSUB 50: X=X+16: NEXT L
40 I$=INPUT$(1): SCREEN 0,,,,,0: END
50 SET PAGE ,0: PUT KANJI (X,Y),Z,14,PSET,1
60 SET PAGE ,1: PUT KANJI (X,Y),Z,14,PSET,2: RETURN
70 _KMID (B$,A$,L,1): _JIS (C$,B$): Z=VAL("&H"+C$): RETURN
```

PUT KANJI in machine language

The subrom of every MSX2 a bios entry is included to do a PUT KANJI in machine language. The coordinates are to be put in GRPACX and GRPACY and are updated automatically, the logic operation is stored in LOGOPR and the color is stored in ATRBYT . For interlace display ACPAGE is to be filled with the active page before doing the actual PUT KANJI. Interlace mode is activated by setting both bits 2 and 3 of R#9 and R#2 should be filled with 63 for page 1 and with 127 for page 3 to see both pages interlaced. The source below describes the interlaced PUT KANJI and includes some more variables:

ML-listing: PUTKANJI.ASM

```
ORG &HC000
;
; EQU's (BIOS)
;
CHGMOD: EQU &H5F
CHGET: EQU &H9F
CLS: EQU &HC3
SUBROM: EQU &H015F
KNJPRT: EQU &H01BD
;
; EQU's (System variabelen)
;
VDP2RG: EQU &HF3E1
ATRBYT: EQU &HF3F2
ACPAGE: EQU &HFAF6
LOGOPR: EQU &HFB02
GRPACX: EQU &HFCB7
GRPACY: EQU &HFCB9
VDP9RG: EQU &HFFE8
;
; PUT KANJI demo - BiFi'99 - Interlaced version
; Non-interlace is very easy to extract from
; this source.
;
START: LD A,7 ; SCREEN 7
CALL &H5F

LD A,(VDP9RG) ; Interlace on
OR 12
LD (VDP9RG),A
OUT (&H99),A
LD A,128+9
OUT (&H99),A

LD A,63 ; SET PAGE 1,1
LD (VDP2RG),A
OUT (&H99),A
LD A,128+2
OUT (&H99),A
LD A,1
LD (ACPAGE),A

XOR A
CALL CLS

LD HL,180 ; X = 180
LD (GRPACX),HL
LD HL,100 ; Y = 100
LD (GRPACY),HL
LD HL,TJIS

PRT_LP: LD C,(HL) ; Read Jis-code
INC HL
LD B,(HL)
INC HL
LD A,B ; Check for table ending
OR C
JR Z,PRTDNE

CALL PRINT ; PUT KANJI twice
JR PRT_LP


PRTDNE: CALL CHGET ; Wait for keypress
LD A,(VDP9RG) ; Interlace off
AND 243
LD (VDP9RG),A
OUT (&H99),A
LD A,128+9
OUT (&H99),A
XOR A ; SCREEN 0
JP CHGMOD
;
PRINT: LD DE,(GRPACX)
PUSH DE
LD E,0
CALL KANJI
POP DE
LD (GRPACX),DE
LD E,1

KANJI: LD A,14 ; Color
LD (ATRBYT),A
LD A,0 ; Logic operation
LD (LOGOPR),A
LD A,E ; SET PAGE (active part)
LD (ACPAGE),A
INC A ; Printmode
```

```
LD IX,KNJPRT
JP SUBROM
,
TJIS: DW &H234D,&H2353,&H2358,&H2342
      DW &H2341,&H2353,&H2349,&H2343,0
```

The routine `KANJI` actually does the `PUT KANJI` thing. The settings are done (color, logic operation and printmode). `SET PAGE` and interlace control can be removed with printmode 0. Adjusting the source for printmode 0 is not that hard. Choosing the source with interlace above the non-interlace is done because the non-interlace version can be easily extracted from this one.

Duur - of niet?



Een week of wat terug was er een rommelmarkt bij mij in de buurt. Gewoon, op zondag, in de sporthal. Voor vijf piek mocht je naar binnen en de koffie in plastic bekertjes was ook niet goedkoop voor een rijksdaalder per slappe bak. Wat de handelaren voor hun tafels hadden moeten neerleggen weet ik niet, maar iemand verdiende hier vrolijk aan. Goed, da's niet erg verder, natuurlijk. Want niemand dwingt mij om dat soort rommelmarkten te bezoeken. En toch doe ik het met regelmaat. Je weet maar nooit wat je tegen het lijf loopt... en ik ben nu eenmaal een verzamelaar van onnutte maar o-zo-leuke zaken. En als ik al niks van mijn eigen gading vinden mocht, Lies verzamelt peper-en-zout stelletjes in de vorm van varkentjes. Tuurlijk, op eBay koop je die dagelijks — dat is geen grap, ga maar eens kijken op www.ebay.com en zoek naar pepper en pig — maar de dollars zijn toch wat begroetelijk. Om van het verzenden van die beestjes over de grote plas nog maar te zwijgen!

Dit keer was het trouwens wel goed raak: drie stelletjes en twee verweesden, wiens partner ergens in het leven verdwenen was. Ook die neem ik mee natuurlijk: Lies heeft ook al wat weesjes en je weet maar nooit. Als ze nou ooit nog eens die lang beloofde website zou maken met digitale prentjes van haar collectie zou ik me ze beter in kunnen prenten.

Rare dingen, rommelmarkten. De resten van onze rijke maatschappij worden daar voor een paar piek uitgevent door mensen die daar blijkbaar een hobby in hebben. Maar al te vaak bekruipt me het gevoel dat de waarde van zaken bepaald wordt door de plek en de tijd: hoe ouder, hoe duurder. Spulletjes die ik twintig jaar geleden ooit aan de stoeptrand heb gezet komen hier weer terug, voor prijzen die me doen twifelen of ik ooit nog wel wat weg zal mieteren. En aan de andere kant, dingen die een paar jaar terug nog stervensduur waren gaan hier voor een appel en een ei van de hand. Het maakt me wat bespiegelend over de waarde der dingen, zou je wel kunnen zeggen. Misschien dat ik daarom rommelmarkten zo leuk vind...

Met regelmaat kom je ook computers tegen op die markten. Of — om een dwarsstraat te noemen — op Koninginnedag. Ik begin daar niet aan, want het museum staat onderhand knap vol. En om nu door een stervensdruk Amsterdam — verdraaide provincialen! — te moeten zeulen met een homecomputer of twee staat me echt niet aan. Mocht ik ooit een Commodore PET tegenkomen wordt het een lastiger keuze, da's één van de laatste modellen die ik nog echt ontbeer.

Ook dit keer was het raak. Op zowat de laatste tafel lag ie: een Sony HitBit 75. Compleet met alle boekjes. En zwaar onder het stof, zó van zolder geplukt leek het wel. Achter de tafel stond een wat volks type, de verdere handel bestond grotendeels uit tweedehands pornoboekjes, van het soort dat verdacht kraakt als je ze open zou willen doen. Blijkbaar ooit vochtig geworden...

En waarom, dat weet ik nog steeds niet, maar ik stond blijkbaar net even te lang te kijken naar die oude HitBit. Dat trok de aandacht van de verkoper, die me blijkbaar inschatte als iemand met weinig verstand van zaken en prompt vijftientig piek riep. Een koopje, zei ze erbij. Want die pc was hoogstens vijf jaar oud. Grijnzend schudde ik van nee. En werd meteen met een volgend prijspeil om de oren geslagen: een tientje dan? Want anders zou ze het ding toch maar weer mee naar huis moeten zeulen en het was al laat op de middag. Elders werden al tafels afgeruimd en sommige onverkochte prachtstukken hoefden blijkbaar niet mee terug. Die werden even met een vakkundige klap of trap vernield, alvorens in het vuilnis gedumpt te worden. Want iemand zou het eens gratis kunnen meenemen...

Ik denk eigenlijk dat dat nou de reden was dat ik toch viel voor die HitBit. De aan zekerheid grenzende waarschijnlijkheid dat het beestje binnen een kwartier aan puin getrapt zou worden. Ik ben een sukkel, ik geef het toe. Maar dieren en computers zijn me lief.

Dus, voor vijf guldentjes werd ik de eigenaar van een HitBitje. Met de boekjes erbij. Er kwamen zelfs nog een tv- en cassettekabel onder uit een doos en één of twee spelcassettes. En met een MSX'je onder de arm verliet ik de sporthal, op weg naar huis.

Die HitBit staat nu gewoon na even poetsen in mijn steeds groeiende verzameling technologisch afval. Die staat daar goed, voor het geval dat ik het apparaat ooit eens nodig heb. Vooralsnog zal ik zijn rust niet verstoren: het staat vol met MSX'jes in mijn opslag en er is er maar eenje gebruiksklaar. Maar al wandelend liep ik me toch weer eens te meer te beseffen dat we in een rare wereld leven. Die mevrouw had er geen idee van wat ze eigenlijk te verkopen had. Waarschijnlijk kwam het apparaat uit een boedelverkoop, waar veel van dit soort rommelbeurshandelaren hun negotie bij elkaar scharrelen.

Alleen, ik besepte me wel dat ik zojuist voor vijf piek — en ik maak me sterk dat een rijksdaalder ook genoeg was geweest — een computer had gekocht die amper vijftien jaar eerder bijna vijftienhonderd gulden moest opbrengen. En als ik niet zo gek was geweest om er die vijf guldentjes voor neer te tellen was het ding gewoon afval geworden. Tegenwoordig is de verwijderingsbijdrage voor een elektrische tandenborstel zelfs hoger, geloof ik.

In onze wereld verliezen zaken snel hun waarde. In vijftien jaar is alle elektronica goedkoper en beter geworden, maar nergens is de ontwikkeling zo extreem als met computers. Een pc van een paar jaar oud is schroot. De homecomputertjes van vijftien jaar terug zijn in de ogen van verreweg de meeste mensen achterhaald kinderspeelgoed. En ergens hebben ze natuurlijk nog gelijk ook. Misschien is dat wel de reden, dat ik MSX nog altijd zo leuk vind. En zo'n onbehoorlijke lol kan hebben als ik

me beseft dat er nog altijd mensen zijn die er veel plezier aan beleven. Zoals wij.

Wammes Witkop

previous:
[MSX-Kanji revealed](#)

MSX Computer & Club Webmagazine
issue 91, January/February 2000

next:
[23 steps to high resolution on MSX1](#)

23 steps to high resolution on MSX1

Someone once told me watching 8-bit-demos is like watching a magicians show: you know he's just fooling the eye all along, but you never know how. But the similarities between magicians and coders go beyond that, just like magicians coders seem to think if they reveal how their effects were coded it's not magic anymore. A real coder will lie, cheat and deceive you all in the name of fame for the impossible stunts he's pulled out. A coder who falls beyond this just couldn't be a real coder at all, left alone code for a real demogroup. But I've really never felt like that anyway.

Antti Silvast

Directory

- [MSX-idiosyncrasies](#)
- [Moving on from block city to hires-euphoria](#)
- [More & Faster](#)
- [Let's talk physical](#)
- [Kultajyva](#)

References

- <http://www.komkon.org/fms...>

Small dictionary

| word | explanation |
|---------|--|
| retrace | The period where the electron beam is refreshing the screen. Occurs at the rate of 50 Hz/60 Hz |
| vblank | The period where the electron beam drawing the screen is moving from the bottom of the screen back to the top of the screen. Generates an interrupt. Occurs at the rate of 50 Hz / 60 Hz |
| ram | Normal ram you can access with normal Z80-memory accessing commands |
| vram | ram-memory specifically dedicated to the video processor |
| vdp | video display processor |
| sprite | A hardware generated image that gets drawn in top of your pattern-based graphics with one transparent colour. |
| bob | A software sprite |
| NOF | No Operation: a Z80- |

The first thing you must realize about coding 8-bit demos is that the math involved isn't really that complicated. Still checking out those 1240 texturemapped polygons on screen and wondering how on earth did those 8-bit-wizards manage to optimize it all to run 50 Hz on a 1 MHz machine realtime? Well, I'm sorry if I'm the first one to tell you this, but they did not. Nothing at all on 8-bit demos is neither very realtime nor optimized. Or maybe it's realtime enough to have a realtime screen dumper, but that's pushing it. If any optimization at all was performed, it was the precalc that was optimized in size and speed, not the actual code. That's why I won't go into any depths of mathematics on these articles. I'm not going to tell you how to write your own 3D-engine on the MSX because I've never written one myself. You must realize it doesn't really matter how fast the precalc-algorithms are, since all they really do is precalc. Of course the faster the routine, the less time you'll spend waiting.

So what's the catch? Why don't anyone start coding their own animation-showers for the 8-bits pretending the stuff is very realtime and making people believe they're actually very skilled coders? Well, first of all, nobody's still converted Java(tm) to MSX and most of the wannabe industrial programmers are just too lazy to learn any language not attached with the stamp "commercially profitable". Now who on earth would hire an expert in hacking an over 15-year old computer with an 8-bit-processor already long out of production? Second, it's not all that easy. You see, the real problem is not coming up with the actual precalced effect, but outputting the data to the screen. For a 32-bit-programmer this will seem simply ridiculous. Picture the scene where you could perfectly render a realistic Doom on your 64x128 offscreen buffer at the rate of 20 Hz, but simply couldn't draw the darn thing to screen fast enough. We'll, that's almost exactly the case with 8-bits. So when the closing 3D-scene from C64-version of 2nd Reality starts rolling, both the superhuman pc-coder and I will be gasping, but for different reasons: He'll be going 'how do they draw all those 1024 polygons realtime?' whilst I'm thinking 'To hell with the polygons, that has got to be an animation. But how on earth do they output it that fast?'

MSX-idiosyncrasies

I must say I'm not at all familiar with other 8-bit-systems than MSX. I've never coded on C64 or Spectrum or anything even during my Basic-days. So when ever I'm talking about 8-bits that strictly based on my limited knowledge on other 8-bit-systems and somewhat less limited knowledge on the MSX.

Still I'd be willing to say, that MSX is an extremely awkward machine to code in hires. For starters, you don't have real vram. Oh yeah, there's a whole lot 16 kB of it, but it's not mapped to your regular ram at all. Instead the vram is accessed through ports, one byte at a time; a feature that for reasons beyond my understanding also seems to be implemented on Sega's Master Sytem, Game Gear and Megadrive-series. The profit of having real vram mapped to your real ram is obvious: speed. On the darker side you do lose some memory, but really, even 48 kB ought to be enough for everybody. Or maybe organise the memory in several 64 kB banks one being the video memory.

Anyhow, we're stuck with this feature and that's it. The real problem is really not just writing or reading, ram-access isn't that fast either, but you always read or write the data in the same order. The vram-pointer increases every time you IN or OUT the port; so it's easy to write 512 sequential bytes to vram, but just as slow writing 256 bytes using every other memory place and filling the gaps with blanks. Or picture having several bobs rotating around the screen. With real vram it would be easy to make the effect fullscreen just outputting the bobs to the desired areas on screen buffer. It's of course possible to use the same method with MSX, but you'll have to set the vram-pointer again every time you start to output a new bob. Setting the vram-pointers requires two OUT-operations, so you can easily see, that whilst the number of bobs increases, MSX is left further and further behind of it's 8-bit-cousin with real vram.

Second, you can only write during the vblank. If you try to output too fast during the vretrace, the data will become distorted. Of course you could stuff you're code with NOF's, slowing it down intentionally, but hey, the MSX is no monster with it's 3.5 MHz and slowing down even more from there would be just plain laughable. So we'll have to make our output during the vblank and that's it. In practise I've found out that 2048 writes is just about the maximum value you can output, if your inner loop is optimized enough. On SCREEN 2 the used amount of vram is 12 kB, so it would take six vblanks just to refresh the entire screen. That wouldn't be so bad if you could doublebuffer, but for the entire screen you can't thus creating six raster splits. So summa sumarum: fullscreen hires effects can't be created on the MSX. But it also applies that you should never say never, since in a future article I will show you how to make fullscreen hires-effects by using character based-graphics.

Let's consider the 2048 bytes once more. SCREEN 3 uses just 1536 bytes for the onscreen data and if you want to take the easy way, you could stick with your legosized blocks for the rest of your life. And there's nothing wrong with that, the pc-sceners will be very impressed even if your effect is running with 4x4-pixels in fullscreen. I just tend to think that they'll be even more impressed when the same effects is running with 1x1-pixels and fullscreen. But maybe that's just me.

Moving on from block city to hires-euphoria

256x192x16 colours. A luxury and a big screenmode for such a small machine. Let's for starters presume we

| | |
|------------------|--|
| | directive that does absolutely nothing except takes time |
| raster split | When the screen is outputted in several frames you get a raster split: the other half of the screen is in different phase than the other |
| double buffering | A method where you show one screen-buffer and draw to an other hidden virtual-buffer and then swap these with each other |

change the colour of each pixel. 16 colours means 4 bits per pixel, so the entire screen would take up memory $256 \times 192 \div 2 = 24576$ bytes. Wouldn't that be sweet, but our MSX only comes equipped with 16 kB. We'll have to cut it somewhere and someone decided to reduce the amount of colours per character. Let's say we had 2 colours per 8 pixels in width and calculate again: 12288 bytes and that's exactly how it is implemented on the MSX.

Using the graphics like this takes some extraordinary efforts and that's why graphics modes in the MSX are nothing more than text modes. That is, you have a 'font': a set of 8×8 -characters with non-fixed patterns and colours. On these articles I will refer to the character forms as patterns and the table of all the character patterns as *pattern table*. One pattern row is 8 pixels stored in 8 bits which equals to one byte. One character takes up 8 bytes in the *pattern table*. The other attribute defining the character is its colour, stored in the *colour table*. If we're in `SCREEN 1`, the colour only takes up one byte, so the entire character is the same colour. In `SCREEN 2`, each character row has it's own colour, so one character takes up 8 bytes in the *colour table*. The colour is always calculated as '16 * background_colour + foreground_colour', where background-colour is used for the pixels on character pattern stored as 0b and foreground-colour for the ones stored as 1b. Now we have our 'font', but we still need to know how to place it on screen. Enter our 'text', the *name table*. The *name table* is a 32×24 -sized table with one byte denoted to each 'letter' on screen, the 'letter' being 8×8 pixels.

One *character set* contains 256 characters, that is, a *pattern table* of $256 \times 8 = 2048$ bytes and a *colour table* of the same size in `SCREEN 2` or 256 bytes in `SCREEN 1`. `SCREEN 1` has only one *character set*, so you really could not utilize fullscreen even if you wanted to. `SCREEN 1` is ok for some special pattern based effects, but the one colour per row feature of `SCREEN 2` is really such a luxury that from now on you can always presume I'm talking about `SCREEN 2` unless I state otherwise.

So `SCREEN 2` is really fullscreen with every single pixel on the screen changable as desired. You can't change every colour because of the '2 colours per 8 pixels'-restriction, but you can still change every pattern. Now our entire screen is 256×192 -pixels which equals 32×24 characters. A bit of calculating reveals that our 256 characters a *character set* only fills one third of the screen. And as I stated earlier, this is exactly the case with `SCREEN 1`. But for `SCREEN 2` to fill the entire screen you actually have *three* character sets independent of each other. Let's call these character sets *charset 1*, *charset 2* and *charset 3*. *charset 1* always takes up rows 0..63 on screen. *charset 2* is rows 64..127. *charset 3* is rows 128..191. As for the *name table* (32 characters x 24 characters), *charset 1* is the first 8 rows, *charset 2* is rows 8..15 and *charset 3* rows 16..23.

A method like this is needed because our *name table* is only one byte accurate and there are 768 characters needed for the entire screen. So a write in the *name table* in rows 0..7 always picks a character from *charset 1*. If you write something in the rows 8..15 it picks a character from *charset 2* and the same way for rows 16..23 and *charset 3*. For instance character 'A' on *name table* position (16,22) will always be the 66th character of *charset 3*. The character 'A' on the position (16,4) on the other hand will always be 66th character of *charset 1*. *Charsets* are divided into patterns and colours just as earlier, so that *charset 1* is *pattern table* and *colour table* from 0..2047, *charset 2* 2048..4095 and *charset 3* 4096..6144.

You must realize, that as a default, these *charset*s have nothing to do with each other. So the characters 'A' on the above example need not to be the same characters. By twitching with a few vdp-registers you can actually alter the number of *charset*s to three, two or one, a feature no-one ever bothered to document, but which is sometimes very useful. So for instance, you could have the *charset 1* copied over *charset 3*, so that the 'A's in above example would be the same characters. The most bizarre part about this vdp-feature is that the number of *pattern tables* actually needn't be the same as the number of *colour tables*. So you could for example have three totally independent *colour tables* but just one *pattern table* for the entire screen. This can be used for some very fruitful and seemingly impossible demo-effects, but I'll cover these more in depth in the future, when I write an article on the 'charset duplication and deproduction'-vdp feature.

More & Faster

A bit on the numbers and speed once more. 2048 bytes per frame, that is if you want to output the stuff to screen 50 Hz. Now I'm not a puritan who requires all his effects to run that fast — yet — but since you can't doublebuffer in the common case, it's raster split time. The restraint on doublebuffering is mostly due to the fact, you can only set the *colour table* and *pattern table* base addresses on a 13-bit accuracy in `SCREEN 2`; see 'charset duplication and deproduction' for more on this subject in the future. As for fullscreen you wouldn't have enough memory for doublebuffer anyhow, but the restraint effectively prevents you doing it for smaller windows too; way to go. However, I have discovered that doublebuffering actually is possible on the restrained case of using a constant *pattern table* and drawing the effects to the *colour table* and only using rows 64..191. Watch this space.

Now someone could point out that we should go for `SCREEN 1`, which has enough memory for 3 *pattern tables* and 24 *colour tables*, and best of all, *colour table* and *pattern table* base-registers that actually act the way they're supposed to. Well, that's a good idea, but remember we only have 256 characters in `SCREEN 1`. Those 256 characters make 2048 outputs and you could output that much in a frame anyway.

So as for now, we're sticking it with the 2048 outputs. That's not very much really. You could refresh one *pattern table* or *colour table* of one *charset*, or half of a *pattern table* and half of a *colour table* of a *charset*. Since one *charset* is only 256×64 -pixels — one third of the whole screen —, we will have to get realistic and only refresh either the *colour table* or the *pattern table*. Hence the terms chunky based effects and pattern based effects. Chunky based effects have a constant *pattern table* and pattern based effects a constant *colour table* for the whole of the screen. In the next issue I'll be going more in depth on how to actually code chunky and pattern based effects in practice, complete with some source code too.

But yet, 256×64 is nobodys idea of full screen and that's the most we can update, so what is these

SCREEN 2-demos are using, magick? Oh no, 8-bits have one God-given gift on their side and that's character based graphics. Duplicate, reduplicate, copy, replicate and unduplicate as much as you ever please, because that's what fools the eye. Remember, character 'A' is always the 66th character — with appropriate colour and pattern — within the same *charset*. It's basically the very same case as when you're reading this text right now. You can write for instance 'JGT' in any part of the screen and it will still look the same. Maybe have the effect running in a 80×192-window and replicate it three times vertically. With just one register twitch you can reduce the number of *charsets* to one and have horizontally replicating effects too, sort of like a super SCREEN 1. If you check the SCREEN 2-effects coded this far closely, you'll notice almost every single one uses some sort of replication; either that, or they're really small. Or they're impossible, using clever vdp-features, there are a few in the MSX1. Remember, 256×64 or areas of any size multiplying to 2048 updates is the biggest updateable unit on pattern based and chunky based effects. Look at the SCREEN 2-effects again and you'll notice none of them actually updates an area larger than this ; apart from the impossible ones of course.

Actually the super SCREEN 1 I mentioned earlier is a well known feature amongst the MSX-scene, implemented by first setting SCREEN 1 is via bios and then setting the SCREEN 2-modebit on vdp-registers. This, however, is nothing more than one single implementation of 'deproduction'-feature. The register-values just happen to be right by accident for one *charset* in SCREEN 2; there's a lot more than that in 'deproduction'.

Let's talk physical

I won't be giving out any effects or code yet, since we're still moving in a pretty basic introductory level for now. For now you should familiarise yourself with the very basic I/O-stuff, like setting up the vdp-address, writing to screen, changing the screenmode and stuff like that. PORTAR.TXT (see reference [1]) is one good reference for that kind of stuff. If you already know these things, stay tuned for the next issue where I'll be giving away two effects: the interference rings and the twisting bars both representing a pattern based effect.

Kultajyva

Aside from pattern based and chunky based effects there's also a third branch of hires-effects, the character based effects. Think about it, the *name table* is only 768 long for the whole of screen. Now why not draw the effect in the *name table* and use fixed characters with fixed patterns and colours? Now what kind of effects would that make possible? Just don't make any noise about it, it's a secret, although by checking a certain classic gamecartridge by Konami you'll notice it's already been invented 15 years ago.

Frank wil ook nog even het woord...

Nawoord

In de vele jaren dat ik mij met MSX heb beziggehouden, heb ik via mijn artikelen in de diverse bladen — MSX-Mozaïek, MSX Club Magazine en MSX Computer & Club Magazine — niet alleen velen wat kunnen leren over MSX, maar heb ik zelf ook veel geleerd over MSX. Door mijn schrijf- en redigeeractiviteiten kwam ik met vele interessante MSX'ers in contact en kreeg vaak inzage in de nieuwste ontwikkelingen. Ontwikkelingen die anderen — onze abonnees — pas in het magazine konden lezen. Vooral als redacteur zie je, terwijl het blad onder je handen groeit, al van alles voor publicatie. Dat lijkt heel leuk en dat is het tot op zekere hoogte natuurlijk ook. Een nadeel is echter dat je nooit eens wat nieuws in het magazine ziet; of het moeten je fouten zijn. Ook moet je je als hoofdredacteur regelmatig beperkingen opleggen, want al is dat laatste nieuwtje fantastisch, je moet het toch naar het volgende nummer verschuiven. Als je het artikel nu opneemt moet je het hele magazine — dat net 'klaar' was — weer overhoopgooien, één of twee andere artikelen eruit en het nieuwe erin. Dan moet de inhoudsopgave nog worden aangepast en als eenmaal alles de deur uit is, stel je vast dat er een paar behoorlijk grote blunders zijn gemaakt. In het nieuwe artikel staan nog taal- en lay-outfouten, de inhoudsopgave is wel aangepast, maar de paginanummering niet. Een ander artikel werd verschoven naar een andere pagina en dat werd in de inhoudsopgave keurig veranderd, maar niet op de pagina zelf. Of nog frusterender; wel op de pagina zelf die ook goed in de map zat, maar niet in de file die naar onze zetter ging. Help! Een enkele keer werd de fout zuchtend geaccepteerd, soms een noodoplossing bedacht, een enkele keer de juiste file in vliegende haast bij de zetter bezorgd. En waarom heeft juist die nu geen internetaansluiting?

Met vallen en opstaan hebben we het vak zo geleerd en toen MCCM stopte viel er enerzijds een leemte, maar anderzijds kwam er ook weer eens wat rust. Toch was het jammer dat een groot deel van de verworven kennis niet meer gebruikt kon worden. Want al regel ik nu wel het clubblaadje van mijn bridgeclub is dat toch onvergelijkbaar met de MSX-periode.

Het aantal mailtjes dat ik, meer dan een jaar na het stoppen van MCCM, nog steeds ontving nam echter maar niet af. Vooral Manuel bleef mij bestoken. Terecht, want waarom werd er niets meer met de site gedaan? Enerzijds omdat de financiële basis was weggefallen, maar ook omdat er niet meer zoveel was om over te melden. Na anderhalf jaar begon er toch weer een behoorlijke hoeveelheid meldenswaard materiaal te komen. Manuel bleef stoken en samen met Wammes die zijn oude liefde niet in de steek wilde laten begon langzaam de revival van MCCM vorm te krijgen. Van begin af werd Manuel duidelijk gemaakt dat het hem niets zou opleveren buiten slapeloze nachten en koppijn. Wel wilde een deel van de oude MCCM-ploeg wat meehelpen. Ikzelf wilde vooral de redactie leiden om zo het redactielijden zo klein mogelijk te houden. Dat leiden niet als hoofdredacteur, maar als adviseur en Wammes gaf mij het vetorecht! Niets zou op de site kunnen komen zonder mijn toestemming.

Manuel heeft de laatste paar maanden een snelcursus hoofdredacteur moeten doorlopen die nogal pittig was. Gelukkig bleek hij een ploeg om zich heen te hebben die mede door mijn mailtjes — alles ging over internet — op hetzelfde spoor werden gezet. Alle neuzen dezelfde kant uit om het zo uit te drukken. Ik bestookte de nieuwe mensen met veel zaken en gaf vele nimmer genoemde argumenten waarom MCCM er destijds uitzag zoals het er uitzag. Toch kreeg de nieuwe ploeg eigen verantwoordelijkheid; ze mochten zelf hun eigen weg kiezen als zij er maar argumenten voor hadden om bepaalde zaken aan te pakken zoals ze deden.

Het resultaat gaf mij een schok van (h)erkenning; MCCM leek uit het graf herrezen en leeft nu op internet nog een aantal nummers door. Hoeveel nummers? Dat weten we geen van allen, we hebben redelijk hoop om dit jaar nog door te komen, maar alles hangt af van de auteurs die voor artikelen moeten zorgen. Ik heb Manuel op het hart gedrukt niet gelijk alles door te geven dat er ontvangen is, maar wat achter de hand te houden zodat je altijd al iets hebt voor een volgend nummer. De verwachting is dan ook dat er twee of drie nummers tot de vakantie zullen komen en in het najaar ook nog minstens een. Of dat alweer het afscheidnummer moet worden is nu niet te zien, we hopen op veel reacties zodat er kan worden doorgedaan, maar dat weten we pas over enkele maanden. Voorlopig zijn we er echter en dat had (bijna) niemand een jaar geleden verwacht.

Veel plezier met deze uitgave en misschien tot ziens op Tilburg.

Frank H. Druijff

previous:
[23 steps to high resolution on MSX1](#)

MSX Computer & Club Webmagazine
issue 91, January/February 2000

next:
[MCCW Contents](#)