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הרכבת

A Quarterly Journal on the Railways of the Middle East
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112:01

Can you see the point? The point being laid at Daniel Junction near Anava where the new A1 line to Jerusalem diverges from the line to Modi'in, just past the tunnel under Highway One (visible in background).

9th. January 2016. (Photo: Boaz Levy, via Aharon Gazit.)

EDITORIAL.

The last quarter has seen several developments in the Middle East; Further death and chaos in what used to be Syria but also attempts to bring together at least some of the rival forces; and Iran has been rewarded with the release of billions of dollars' worth of frozen assets and so it seems almost every country in the world is queuing up to do business with it. Whereas falling oil prices mean a brake on investment in Saudi Arabia and some Gulf States. In Israel there is more progress on construction, with further developments in planning electrification and new electronic signalling; Whereas the only news from certain other countries is of an historic nature, taken from older magazines recently acquired.

The Editor had considered producing a special issue on Syria – there are several lengthy items on file - but in the end there has been so much news in the past quarter that the space available has become limited – so this issue includes only a few less-urgent items – ‘for the record’ – and one is simply grateful that so much is happening. The grumbles of one reader, who would prefer more historical items, are also included to explain the problems of balance. The Editor has also been involved (with others) in preparing a guide book on Israel Railways for visiting enthusiasts and is once again reminded how amazing the rate of progress over the past years has been, how looking at a comparatively-recent back number reveals so much one had already forgotten – hence the emphasis on maintaining as complete a record as possible.

So – Enjoy!

The Editor.



112:03 The new Israel Railways headquarters building takes shape at Lod station. (Photo 11.02.2016, Aharon Gazit.)

112:04.

NEWS FROM THE LINE.

Although I normally follow a policy of adding news items on a chronological basis - First the Really Big News:

(i). MASSIVE RAIL DEVELOPMENT PLAN.

From press releases of 03.02.2016 by the Transport & Roads' Safety Ministry:

“Transport Minister Mr. Israel Katz approved on 03.02.2016 the highest-ever budget for developing the railways until 2020 at about \$7.3 Billion (NIS 28.3 Billion).

The budget includes: \$3 Billion (NIS 12 Billion) for electrification; \$0.95 Billion (NIS 3.7 Billion) for new signalling including ECTS stage 2; \$0.95 Billion (NIS 3.4 Billion) for new electrical depots and converting existing depots for electric traction; building the long awaited Modi'in Outskirts - Rishon Le-Zion Rishonim railway line to run in the median of highway No. 431; linking Modi'in Outskirts with the A1 fast link to Jerusalem, which will involve changes in the structure of Modi'in Outskirts station; adding new sidings for freight trains and freight terminals. Also \$179 Million (NIS 700 Million) for furthering the design of future infrastructure projects such as quadrupling the Tel-Aviv - Haifa line, linking Rishon Le-Zion Rishonim and Rishon Le-Zion West (Moshe Dayan) stations, enlarging Ben-Gurion Airport station and building a Lod bypass line to

reduce the number of trains passing through the city.

A further \$39 Million (NIS 153 Million) will be spent on new passenger stations at Kfar-Menakhem (to be opened in 2017), Mazkeret Batya (both on the Ramla - Be'er-Sheva line) and Netanya Sapir, as well as upgrading existing stations, \$63 million (NIS 245 million) will be spent on park and ride facilities at stations and improvements of passenger services; finally \$85.7 Million (NIS 335 Million) will be spent on grade separations.

Minister Katz added that the approved budget will help to reduce the gaps between the centre and peripheries and increase work

possibilities not only near home.

The railways management said that the budget will significantly improve the services to be provided for the customers; electric traction and new signalling and control systems will enable the railways to increase the daily number of passenger trains from 450 to 860 and achieve the goal of 70 Million passenger a year and even more.

In a deal worth ₪230M made in October 2015 IR has ordered 62 TRAXX AC locos with an option for a further 32.

Deliveries are to start by the end of 2017. Bombardier has already delivered 369 double-deck 'Twindexx Vario' coaches.

(ii). FARE REDUCTIONS IN SOUTH.

From a press release of 09.11.2015 by the Transport & Roads' Safety Ministry:

Transport Minister Mr. Israel Katz announced today – 09.11.2015 - that rail fares for citizens of the southern region will be reduced soon, between 10% to 60% on the lines between Dimona, Beer-Sheva, Ofakim, Ashkelon, Yavne and Haifa.

This is part of the tariff reform on public transport to be introduced on January 2016; the intention is to convince the public to use more public transport services, put an end to the periphery feeling and create equal employment, study and living opportunities for everyone.

But further reductions are to be introduced soon, widening their availability to hundreds of thousands of people who did not enjoy them so far.

Youngsters up to 18 will enjoy a 50% reduction on all public transport lines; social security insured and disabled will enjoy 33%, blind people, national service volunteers, military cadets, and soldiers on a non-paid year of vacation will travel free of charge; people accompanying blind people will enjoy 50% reduction.

Additionally, in each of the four great metropolitan areas of Tel-Aviv, Jerusalem, Haifa, and Be'er-Sheva the ticket for a single journey will be valid for 90 minutes no matter which lines of buses, LRV, or sub-urban trains are used.

(iii). SPUR FOR

MODI'IN - JERUSALEM LINE:

Half a year after the 17 km \$104 Million (NIS 400 Million) curve (eventually spur) double-track line between Modi'in Outskirts station and the A1 fast rail link to Jerusalem was approved by the Finance Ministry, Israel Railways Ltd. has published Tender No. MN/KB/01/15 for carrying out the project which involves enlarging the station and parking area, building an overhead rail bridge No.26 and an overhead pedestrian bridge as well as an underground pedestrian passage in addition to track works. The project must be coordinated with works on the A1 in order to be completed by 2018.

The mayor of Modi'in Mr. Haim Bivas said: "This is a great moment for the people of Modi'in, who will enjoy a direct rail link with Jerusalem to be reached in 17 minutes; additionally, people from surrounding areas will be able to park at Modi'in Outskirts station and reach Jerusalem with a short relaxed journey saving time and nerves on the congested road". Latest bid for submission of proposals: 06.01.2016.

(iv). FOOTBALL SPECIALS.

Israel Railways Ltd. announced that on Tuesday, 24.11.2015 there would be three additional trains for the football match between Chelsea and Maccabi Tel-Aviv to take place at the Haifa Sami Ofer stadium (near Haifa Hof-Ha-Carmel station) at 21:45.

The first train to depart from Tel-Aviv HaHagana at 18:50, calling at HaShalom 18:54, Savidor-Central 19:02, University 19:05, Herzliya 19:12 and terminating at Haifa Hof-Ha-Carmel at 19:52.

The second train to depart from Tel-Aviv HaHagana at 19:08, calling at HaShalom 19:12, Savidor-Central 19:18, University 19:22, Herzliya 19:28 terminating at Haifa Hof-Ha-Carmel 20:14.

The third train to depart from Tel-Aviv Savidor-Central at 19:41 calling at Tel-Aviv 19:47 and terminating at Haifa Hof-Ha-Carmel at 20:43.

Additionally, the regular train of 19:07 terminating at Tel-Aviv Savidor-Central would call also at Herzliya at 19:53, Netanya 20:05, at Hadera-West 20:14 and terminate at Haifa Hof-Ha-Carmel 20:36.

At the end of the game there would be three trains operating on the "Fill up and go" system to call at: Binyamina, Hadera-West, Netanya, Beit-Yehoshua, Herzliya, Tel-Aviv University, Tel-Aviv Savidor-Central, Tel-Aviv HaShalom, and terminating at Tel-Aviv HaHagana.

One train to call at: Binyamina, Hadera-West, Netanya, Beit-Yehoshua, Herzliya, Tel-Aviv University, Tel-Aviv Savidor-Central, Tel-Aviv HaShalom, at Tel-Aviv HaHagana, Bat-Yam Yoseftal, Rishon-Le-Zion Moshe Dayan (west), Yavne West, Ashdod Ad-Halom, and terminating at Ashkelon. Additionally the train which regularly departs from Haifa Hof-Ha-Carmel at 00:52 and terminates at Ben-Gurion Airport would continue to Modi'in Outskirts and Modi'in Central.

(v). EXTRAS FOR CHANUKAH.

Israel Railways Ltd. announced on 29.11.2015 additional trains between Tel-Aviv and Haifa in both directions during the Chanukah holidays between Monday, 07.12.2015 and Monday, 14.12.2015, excluding Friday and Saturday nights:

Southbound: Train 1 departs from Haifa Central the 8 at 11:06, calls at Haifa Bat-Galim at 11:09, at Haifa Hof-HaCarmel 11:16, at Tel-Aviv University at 12:00, and terminates at Tel-Aviv Savidor-Central at 12:04. Trains 2, 3 and 4 depart from Haifa Central the 8 at 12:06 and the following hours, making the same stops.

Northbound - Train 1 departs from Tel-Aviv Savidor-Central at 10:23, calls at Tel-Aviv University at 10:26, at Haifa Hof-HaCarmel at 11:08, at Haifa Bat-Galim at 11:16 and terminates at Haifa Central the 8 at 11:21. Following trains at

hourly intervals – 11.23, 12.23 and 13.23.

(vi). EXTRA TRAINS TO BEER-SHEVA.

Israel Railways Ltd. announced on 23.11.2015 the following passenger service improvements:

An additional train from Lod to Be'er-Sheva: the train departs from Lod between Sunday and Thursday at 06:37 and calls at Kiryat-Gat 07:18, at Be'er-Sheva North/University 07:41, terminating at Be'er-Sheva Central at 07:50.

An additional train from Ashdod Ad-Halom to Be'er-Sheva: the train departs from Ashdod Ad-Halom between Sunday and Thursday at 06:30, and calls at Ashkelon 06:42, at Sderot 06:53, at Netivot 07:04, at Be'er-Sheva North/University 07:29, terminating at Be'er-Sheva Central at 07:37.

(Editor notes: Clearly the demand for commuter seats into Be'er Sheva in the morning is increasing – and fortunately there appears to be stock and staff available to meet the need.)

(vii). 2015 STATISTICS.

From a press release of 26.11.2015 by Israel Railways Ltd.:

The railways published today the financial status for the first nine months of 2015 according to which positive results continue with growing number of customers as well as revenues:

*The net incomes including one-time incomes as a result of cancelling loses from reduced value reached in this period \$75.52 million (NIS 245.7 million).

*The net incomes excluding one-time incomes as a result of cancelling loses from reduced value reached in this period \$22 million (NIS 85.7 million).

Data per sector:

Passengers:

Average passenger numbers reached 206,000/day compared with 175,000/day over the same period of 2014; up by 18%. A new daily record of 220,00 passengers/day has been achieved.

During the period 38.7 million passengers were carried, compared with 35.5 million over the same period of 2014; up by 9%.

Income from passengers was \$149 million (NIS 578 million) compared with \$134.6 million (NIS 522.2 million) in 2014; up by 11%.

Average punctuality was 95.4%; similar to that of 2014.

Freight:

During the first 9 months of 2015 there was a rise in hauling ores, sand, and waste materials, particularly in the 2nd and 3rd quarters; this reached 5.5 million tons - similar to that of 2014 - despite the strike by Israeli Chemical Industries workers which directly affected the volumes.

During 2015 the railways signed new agreements for hauling sand, rocks (for building the new port of Ashdod), and waste materials which will increase rev-

enues for the years to come.

Both Israel Railways Ltd. Chairman of Directorate Mr. Husam Bashara, and the General Manager Mr. Boaz Zafir, said that the railways continued with the positive financial results which will, hopefully continue further on by increasing the number of customers, both passengers and cargo by improving service quality.

(viii). PASSENGER STATISTICS.

From a press release of 09.12.2015 by Israel Railways Ltd.:

A new monthly record in passenger services has been reached in November 2015 - almost 4.9 million passengers; 10% higher against 4.4 million in November 2014, and 30% than 3.7 million in November 2013; it is also higher by 2.7% than the former monthly record of 4.77 million reached in August 2015. The distinctive rise of 17% was on the line between Hod Ha-Sharon and Tel-Aviv (with intermediate stations at Kfar-Sava, Rosh-Ha-Ayin North, the two stations of Petakh-Tikva, and B'nei-Berak); 20% on the same line between Tel-Aviv and Ashkelon (with intermediate stations at Holon, Bat-Yam, Rishon-LeZion West, Yavne West, and Ashdod Ad-Halom). The main reason for the rise are works on the Tel-Aviv LRV Red Line which cause bottlenecks which can be avoided by using rail on adjacent routes.

(ix). WORKS ON JERUSALEM LINE.

IR announced that due to infrastructure works to be carried out on the A1 fast link to Jerusalem, there would be no traffic to/from Modi'in on Friday 17.12.2015 from 00:01 until Saturday night 19.12.2015 when traffic would resume; trains to start/terminate at Ben-Gurion airport; bus shuttle services between Ben-Gurion airport and Modi'in to be provided.

Also – on 19.01.16 a major setback was reported: Just seen a report on Channel 2 news: one of the connecting tunnels between the two main tunnels has cracked, causing water to flood the tunnel. IR blames Shafir, the company carrying out the work. Shafir blames IR for wrong specifications, saying the concrete layer is too thin for the weight of water. IR says the line will open in March 2018. Believe it when you see it!

On 28.02.2016 Aharon wrote: "The A1 fast link to Jerusalem: The discussion and disagreement between Israel Railways Ltd. and Shafir Engineering with its Italian partner Pizerotti is heating up and has reached the court with mutual accusations. While the joint venture group Shafir-Pizerotti claim that they warned the railways about failures in tunnel design as far back as at least 4 years ago, the collapse of the floor on cross section tunnel No.24 on the A1 has just unveiled



Ballasting Work on high-speed line 04.02.2016



Photos courtesy of Sybil Ehrlich

the "edge of the glacier", and that all the 46 cross section tunnels in the twin-bored 11.6 km tunnel are suffering from the same design failures, which may cause work stoppage since they endanger the whole project.

The Railways on the other side claim that the timing of the announcement of the problem is not coincidental; Shafir - they claim - is indeed a big construction company, but each of their projects is filled with errors and mistakes, such as the rail link between Ashdod, Yavne West, and Rishon-Le-Zion West; the Modi'in Central station, where failures have not yet been repaired; the Valley Line (Hedjaz) which is under construction; some highways, etc.; In all their projects there were schedule delays and requirements for additional budgets, although some of the projects are 'Design & Build' and they have to "swallow" the delays, the railways - in order to avoid further delays – have often come to compromises - which cost a lot.

The A1 line manager Mr. Kogan said that despite the problem on tunnel 24 - which can easily be repaired by improving drainage - this does not affect the A1 schedule overall and the operating date will remain 2018. He added that, in order to be on the safe side, an additional five

cross section tunnels will be checked and if necessary will be repaired."

(x). NEW FREIGHT CONTRACTS.

From a press release of 03.12.2015 by Israel Railways Ltd.:

Israel Railways Ltd. and Amit Cargo Transport By Rail Ltd., have signed an agreement

to haul containers, sand, waste materials, and aggregates by rail freight cars owned by Amit.

According to the agreement, the railways will haul for Amit cargo between 01.01.2016 and 31.12.2020 on the lines B'nei-Brak - Tzefa and Haifa - Hadera West - Tzefa.

The contract is based on minimal tonnage and can be

extended by additional 5 years if agreed by both sides. The railways' Deputy General Manager of Cargo Department Mr. Uri Sharir said: "While in 2013 the railways carried 385,000 tons of sand and waste materials with income of \$4.1 million (NIS 16 million), the forecast for 2016 is 2.5 million tons and an income of \$13.1 million (NIS 51 million), and for 2017 the forecast is for almost 2.85 million tons and an income of \$14.95 million (NIS 58 million)."

FREIGHT TRAFFIC:

- 2013 385,779
- 2014 567,260.
- 2015 572,858
- 2016 (projected) 2,532,416
- 2017 (projected) 2,849,617

(xi). ELECTRIFICATION WORKS – CONTRACTOR CHOSEN.

On 06.11.2015 the railways informed the Spanish company SEMI (Sociedad Espanola de Montajes Industriales S.A.) that they won the tender for building and maintaining the railways electrification infrastructures.

SEMI is a leading company in design and implementation of electric rail networks in Spain, well experienced in designing overhead lines as per the Euro-

pean standards, and one of the leaders of the Spanish ACS group. SEMI has beaten the other 3 competitors: Elecnor, Alstom, and Siemens in the best and final stage.

Israel Railways Ltd. General Manager Mr. Boaz Zafirir said: "The electrification program, is with no doubt one of the most significant programs being carried out since the foundation in 1948; it will entirely change the face of the company; the number of trains per day will double and service quality will be further improved". Some details:

The overall cost of electrification is estimated at \$3.1 billion (NIS 12 billion), of which the infrastructure cost is about \$515 million (NIS 2 billion).

The electrification covers 420 km of lines, about 1,080 km of single track; 13 passenger lines.

Design and building of 14 transformer facilities.

Design and building of overhead catenary.

Design and building of control systems.

Electrification of lines at all depots and railway sites.

Currently four new lines are in construction: the Haifa - Beit-She'an Valley line, the Hod Ha-Sharon - Herzliyya line, the A1 to Jerusalem, and the Acre - Carmiel line; most of them will be electrified, and the aim is to complete the electrification until no later than 2018 when the A1 is to be opened. (It seems the Carmiel line will not be electrified initially and the Beit She'an line will initially be laid as single track although the alignment is built for double.)

From 'R.G.I.' 11.12.2015: "Israel Railways has awarded Sociedad Española de Montajes Industriales a 2Bn Shekel contract to build and maintain electrification infrastructure. The Spanish company beat bids from Siemens, Elecnor, Alstom and China Railways Construction Corp.

The contract announced on December 6 covers 420 route-km across 13 lines and includes the supply of 14 substations and control systems for the 25 kV 50 Hz power supply, to be carried by overhead catenary.

SEMI will provide 10 years of maintenance, with an option for a further 15 years. ISR envisages that electrification work will get under way in February 2016, with the first electric train due to operate on the A1 fast line to Jerusalem in March 2018."

(xii). DISRUPTION DUE TO CABLE WORKS.

The railways announced that on the night of Wednesday 16.12.2015 from 22:30 and until 05.00 on Thursday 17.12.2015 trains from the south, namely Jerusalem, Be'er-Sheva, Rehovot, Modi'in, Rishon Le-Zion Rishonim would terminate at Lod. Trains

from the north, namely Nahariyya, Haifa, and other stations to Tel-Aviv, would terminate at Tel-Aviv HaHagana; the section from HaHagana, Lod, and Ben-Gurion airport will be closed due to works being carried out by the Israeli Electrical Company; these have nothing to do with the railways electrification project.

(xiii). OFAKIM STATION OPENS.

From a press release of 31.12.2015 by the Transport & Roads' Safety Ministry:

"The city of Ofakim on the recently opened Be'er-Sheva - Ashkelon line will served by rail from Saturday night, 02.01.2016.

Transport Minister Mr. Israel Katz together with Israel Railways Ltd. Chairman of Directorate Mr. Husam Bashara, its General Manager Mr. Boaz Zafirir, the mayor of Ofakim, and other VIP's inaugurated today, 31.12.2015, the \$13 Million railway station of Ofakim.

The station has a modern passenger terminal, platforms, three tracks with an option for a forth track, an underground pedestrian subway, a parking space for 400 cars, convenient access to public transport and bicycle lanes.

The feeder bus lines will be coordinated with trains' arrival/departures; there will be 25 trains between Be'er-Sheva and Ashkelon daily on each direction; Ofakim will be reached from Be'er-Sheva in 15 minutes; Ashkelon will be reached from Ofakim in 30 minutes.

The people of Ofakim will enjoy free journeys on the Be'er-Sheva - Ashkelon line for three months, and 50% reduction of fares on all other destination also for three months in order to encourage people to use rail.

Transport Minister Mr. Israel Katz said: "I'm excited to be here today and inaugurate the third and last station on the line; it links the south with all other parts of Israel....; I had to fight hard against the Finance Ministry who claimed that the line is not economically worthwhile; the rising passenger traffic on the line - even prior to the opening of Ofakim station - proves the opposite".

Israel Railways Ltd. Chairman of Directorate, its General Manager Mr. Boaz Zafirir, both said: "The railways are turning the vision of making the southern part of Israel into an area worth living by opening new lines and stations; we hope the people of Ofakim will enjoy it as is the case with the other two intermediate stations on the line".

(xiv). SPACE AVAILABLE AT NEW LOD HEADQUARTERS.

A Request for Information (R.F.I.) has been issued for companies interested in renting/hiring offices at the railways' new Business Centre at Lod station:

The new centre is being built as part of the railways' complex which includes the general management and training centre. The railways' centre is to be opened in the middle of 2016, while the business centre with an area of 10,000sq.m. will be ready during 2018. Latest date for submission of proposals: 15.01.2016.

(xv). VOSSLÖH BOUGHT BY STADLER.

From 'Today's Railways Europe' 240 p.12: "German rail engineering firm Vossloh has sold its Rail Vehicles business in Valencia (Spain) to Swiss train-building firm Stadler Rail in a deal announced on 4 November but backdated to 1 July. The deal is valued at €172M with Stadler paying €48M in cash and taking over debts of €124M. Vossloh Rail Vehicles had been operated as one of the three business units in Vossloh's Transportation division. All were put up for sale earlier in 2015 as Vossloh intends to focus on rail infrastructure and service activities in the future. The sale process for the other two units, both based in Germany - Vossloh Locomotives in Kiel and Vossloh Electrical systems, headquartered in Düsseldorf, is ongoing.

Vossloh bought the Valencia plant in 2005 from Alstom which in turn had owned the former Materiales para Ferrocarriles y Construcciones SA (MACOSA) plant since 1989. The business was relocated to an industrial area in Albuixech about 9km north of the city centre near the coast in 1997 when the historic city centre factory site was closed. It has now been demolished, in part to make way for the high speed line connecting Valencia with Madrid.

Alstom built the UK class 67 fleet in Albuixech (EMD model JT 42HW-HS) in 1999/2000 and Vossloh the related RENFE class 334 (EMD JT42BW.HS HE) in 2006/7. These were both forerunners of the Euro 3000 which has been sold to Israel Railways as class 1300. The new Euro-Light model unveiled in 2010 is derived from the Euro 3000 but using a lighter weight Caterpillar diesel engine rather than the EMD unit, as is the new UKLight (Class 68) which also has a UK loading gauge body. The Valencia plant also produced the powerful (3178kW) Euro 4000 diesel, which is still being delivered to Europorte and VFLI in France, but has an EUIII non-compliant EMD engine. Vossloh has been developing an electro-diesel version of this design.... The plant employs about 8450 staff..." (The article is accompanied by a photo by Keith Fender showing DRS/Beacon Rail loco 68003 in primer on static test alongside an equally newly-built Euro 3200 for Israel on 10th. Feb. 2014.)

(xvi). 'START-UPS COMMUTE ON MONEY TRAIN' -

*From 'Times of Israel' 16.12.2015.
By David Shamash.*

"To find good start-up talent in Israel, you can look in the usual places or you can look off the beaten track, in Israel's geographical and demographic periphery.

On the MoneyTrain aka an Israel Railways ride, top investors from Israel and abroad on Tuesday had the opportunity to find top start-up talent outside the country's centre, said Oren Kochavi, Innovations Director at Terra Venture Partners, which organized the first of its kind start-up pitch event. We started out in the north, in Haifa, and rode the train all the way south to Beersheba – uniting both ends of the country in an unusual tech event," Kochavi told The Times of Israel. "It's important for us, and for Israeli tech in general, to realize that there is great talent all over the country, not just in the centre of the country. That's our message to investors, as well as to entrepreneurs."

For a day, an Israel Railways train turned into the MoneyTrain, with one car dedicated to holding the kind of tech pitch event usually reserved for hotel ballrooms or corporate boardrooms. Executives from top multinationals, investment firms, and tech accelerators came, including eBay, Tyco, Motorola, Poalim Fintech, Deloitte, Bosch, Vertex Venture Capital, and many others.

Start-ups ran the gamut from cyber-security to Internet of Things to fintech firms. Each company got ten minutes to pitch investors, shuffling between four-seat sections that are a feature of Israeli trains. The event ended with a gala reception at WeWork, a US-based office workspace that recently opened up in Beersheba – another sign, said Kochavi, that the Israeli periphery is slowly but surely joining the centre of the country.

"The tech ecosystem is growing and expanding, perhaps not as fast as we all want, but it's making great strides. I was in charge of the MoneyTrain event at the Haifa station, where we started from, and we had dozens of people stop to ask what was going on – and praising us for doing a start-up event that included the north."

The ride on the Haifa - Beersheba route is symbolic of the closure of that gap. The ride itself is about three hours and at both ends passes through two important projects that are designed to bring the periphery closer to the centre – the Matam high-tech park in Haifa and the Advanced Technologies Park (ATP) in Beersheba.

The former, established in 2010, is home to R&D facilities of companies like



Kfar Menachem station as it currently looks.



Intel, IBM, Microsoft, Yahoo!, Philips, Google and Qualcomm, while the ATP, established in 2013, places an emphasis on cyber-security, with several large multinationals, including Deutsche Telekom and Lockheed-Martin, setting up R&D centres there.

Terra believes that Israel's demographic periphery, as well as its geographical one, is a source of entrepreneurial talent....."Today, a large proportion of Israeli start-ups focus on developing social, gaming and advertising applications. The aim of this program is to empower a new generation of entrepreneurs in order to tackle the most pressing market challenges of the 21st century."

MoneyTrain fits Terra's philosophy very well, said Goldstein. "It's a great opportunity for start-ups from around the country to meet top business leaders face to face. With the MoneyTrain we are raising the consciousness of investors that there is a lot of great tech outside the centre of the country. This is a novel way to get the message across."

Another report from Aharon indicates that two coaches in a double-deck set were made available, the investors sitting upstairs, and 40 people participated out of 600 applicants!

(xvii). PUNCTUALITY STATISTICS.

On 07.01.2016 Israel Railways Ltd. gave the following data regarding punctuality improvements: Punctuality was 86.6% in 2011, 89.99% in 2012, 93.31% in 2013, 95.34% in 2014, and 95.25% in 2015 between January and November – inclusive. Punctuality refers to trains arriving at their final destinations within 5 minutes of schedule.

(xviii). MORE WORKS.

- The railways have announced that due to infrastructure works the Nahariyya - Ben-Gurion Airport line will be closed for traffic between Thursday night, 14.01.2016 at 00:01 and 03:45. As a result, the trains of 00:13, 01:13, 01:53 and 02:53 are cancelled.

- HERZLIYYA WORKS.

Israel Railways Ltd. announced on the website that due to infrastructure works to be carried out at Herzliyya station on Friday 29.01.2016 from 06:00 the following changes on traffic between Herzliyya and Jerusalem would take place:

The trains to Beit-Shemesh and Jerusalem regularly departing from Herzliyya at 06:02, 07:02, 08:02, 09:02, 10:02, 11:02, 12:02, and 13:02 would start instead at Tel-Aviv Savidor-Central. The trains to Herzliyya regularly departing from Jerusalem and

Beit-Shemesh at 06:29, 07:29, 07:47, 08:47, 09:47 10:46, 11:46 and 12:46 terminated instead at Tel-Aviv Savidor-Central. Traffic would resume on Saturday night, 30.01.2016.

- BE'ER SHEVA WORKS.

The railways have announced in their website that due to infrastructure works to take place at Be'er-Sheva Central station, the section between Be'er-Sheva Central station and Be'er-Sheva North/University station will be closed for traffic during Saturday night, 27.02.2016; all the trains from/to Be'er-Sheva will start/terminate at Be'er-Sheva North/University station; bus shuttle services will be provided between the stations. Traffic will resume on Sunday, 28.02.2016.

(xix). ROLLING STOCK FOR ELECTRIC OPERATION.

From a press release of 20.01.2016 by Israel Railways Ltd.:

"Today – 20.01.2016 – was an historical milestone: the first double-deck train converted for electric traction has been handed over to the railways by Bombardier.

The contract with Bombardier included 72 new double-deck cars manufactured for electric traction; additionally, teams from Bombardier and the railways are converting 293 existing double-deck cars – so far suitable for diesel powered trains – to electric traction.

Very soon the conversion of Siemens made single-deck cars to make them compatible for electric traction is to start; all these works are currently being implemented at Kishon works north of Haifa.

The railways are also active at several levels in preparing for the electrification, by building electrical infrastructures, purchasing further electrical trains (the winner not yet decided), building depots for electrical trains, converting existing depots and building a new signalling and communication system.

The first converted train has been upgraded by Bombardier in safety, technical, and operational aspects, including:

1. Fitting out for running in tunnels longer than 2 km while implementing advanced European fire safety standards.
2. Increasing top speed from 140 km/h to 160 km/h.
3. Hand-in-hand with increased speed, an electro-pneumatic braking system has been installed.
4. Advanced control systems have been added to enable, among the others, interface with the electrical loco and control of the pantograph arm.
5. Energy management systems have been installed.

In an internal ceremony with the participation of Israel Railways Ltd. Chairman of Directorate Mr. Housam Bashara, Israel Railways Ltd. Deputy General Manager Mr. Benny Lavi, and Bombardier Deputy

President and Head of Service Department Mr. Michael Forer. Mr. Bashara said: "The railways are in intensive preparations toward the electrification which will significantly change the system". Mr. Forer said: "It is a great honour for me to be here; it is a significant achievement in the long and fruitful cooperation between Israel Railways Ltd. and Bombardier."

(xx). EXPANSION OF KISHON WORKS.

On 25th. January the Committee for Planning and Building National Infrastructures headed by Accountant General Mr. Avigdor Yitzhaki approved the plan for enlarging and upgrading the railways' Kishon works at Haifa (known also as Efrayim works).

According to this plan the overall area will be increased from 25 hectares to 46.5 hectares by adding further entrance tracks to avoid disruptions to the nearby main line Haifa – Nahariyya; this includes additional 13 hectares for a depot which will include a new entrance gate from the north, railway carriage shed, a carriage washing plant, a 0.2 hectare two-storey structure with a 20m high control tower, and two new overhead pedestrian bridges, one at the northern part and the other at the southern part of the site to provide safe access to/from the adjacent Haifa Hutzot-HaMifratz station, both for railway employees and for other users.

The whole site will have overhead wires as part of the electrification programme and the works and depot will be converted for this purpose, although it will continue to serve Diesel locomotives and Diesel multiple units as well.

As per the committee's request, the railways thoroughly checked the area to be built and it has been decided to preserve the British built office building, the H-shaped main works building and the small eucalyptus forest, all of which date from 1937.

(xxi). INSTALLATION OF NEW ELECTRONIC SIGNALLING SYSTEM.

An Invitation to pre-Qualify for Tender 41502 was issued – design and Building ERTMS Level 2 trackside signalling project. Deadline 09.02.2016.

ETTS / ERTMS PLANS. (European Train Control system / European Rail Traffic Management System)

The current route length of the IR network (as given in official tender documents of November 2015) is about 625km. Total track length is about 1,175km. (This includes double-track and station and sidings.) The signalling system is based on electronic and relay interlocking, using axle counters as well as isolated track circuits as a train detection system. A variant of the INDUSI (Induktiv Zug-Sicherung – 'Inductive Train Protection) is applied as an automatic train detection

system, with track magnets placed 370km before the main signal.

Other lines are being constructed and yet others planned. It is planned that with the extensions already under way the future network will be about route 880km and 1,500 track km. Routes will radiate out from the main spine along the coastal plain.

Such network extensions and the rising volume of both freight and passenger traffic has led to some bottlenecks. One is the Ayalon corridor. Initially the problem here led to the line being tripled, then a new shortened block length scheme was introduced, also limiting maximum speed along this section so that the capacity in this core section could be raised to ten trains per peak hour per direction. Soon there will be the added pressure of more trains from the new Jerusalem line joining the Modi'in - Tel Aviv line at the Tzomet Daniel and then the Lod – Tel Aviv line at Tzomet Ganot. To overcome capacity issues several projects are under way, including rebuilding the track layout at Herzliya station, rebuilding the layout at Tel Aviv Merkaz and HaHaganah to enable a central track to be available for turn-round purposes, and rebuilding the track layout at Lod station.

Since there is so much expansion and acceleration and the INDUSI system is approaching the end of its life cycle IR intends to install ETCS Level 2 control systems. This will replace visible signals by installing information panels in the loco cabs. Currently IR is divided into two main areas, North and South. North runs from Nahariyya to Shefayim and stations are currently operated by relay interlocking, which is about to be replaced by 2019 by Electronic Interlocking ESTW L90. The Control Centre is at Hof HaCarmel (which is also the main Network Traffic Control Centre); In the south, from Shefayim to Be'er Sheva stations are already operated under ESTW L90IL. The Control Centre is at Lod.

50Hz Track Circuits are installed and where axle counters still exist the plan is to replace these with 50Hz track circuits.

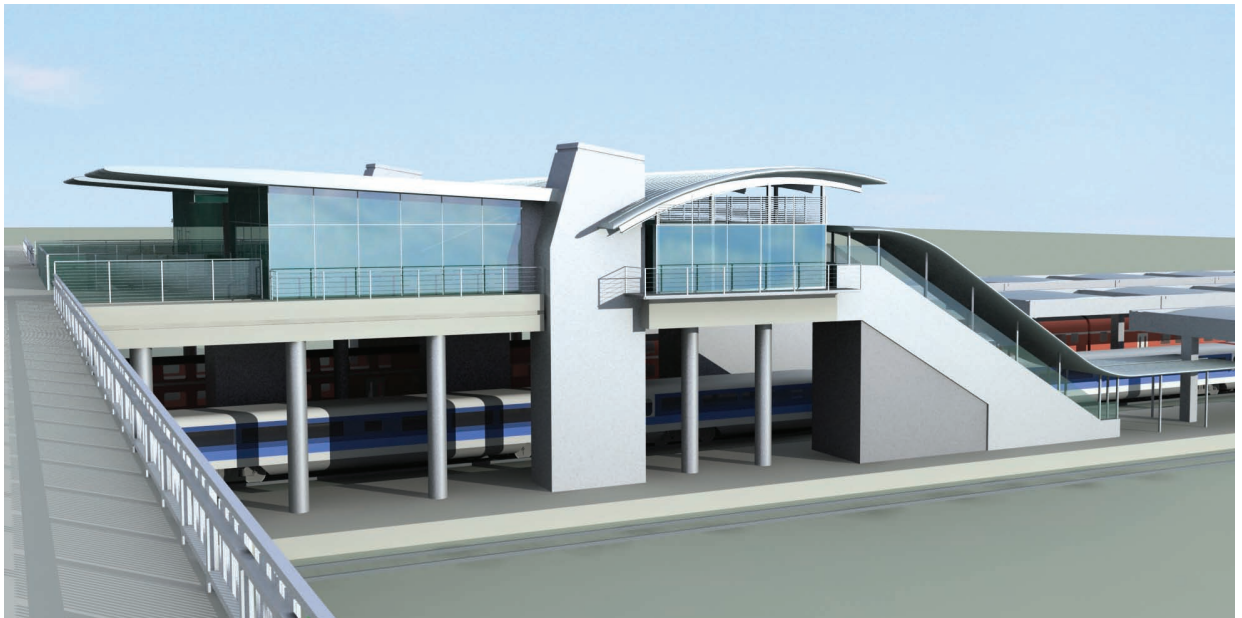
Signals all show continuous and not flashing lights – Red for Halt; Yellow for Caution/Slow (normally 60kph unless otherwise indicated); Green for 'Go'; a non-functioning signal must be treated as red. There are also smaller shunting signals. Speed signals follow European practice whereby '6' means '60kph' or '10' = '100kph.'

IR has its own fibre-optic telephone network, also a VHF radio communication system with around 20 base stations that covers the current network and will be retained as reserve but GSMR is to be installed.



Left: mpression of the proposed new Blue Line from Malcha - crossing the former railway line.

Below: Artist's impression of new northern access to platforms at Tel Aviv Merkaz



The intention is to install ERTMS in three stages:

Stage 1 would be Herzliyya – Tel Aviv – Jerusalem HaUlma – Modi'in (but excluding Lod) 213km of track, 89 route km.

Stage 2 would be Nahariyya – Carmiel – Beit She'an, Kfar Saba – Herzliyya – 440km track km.

Stage 3 would be Lod – Rosh HaAyin – Ashkelon – Kiryat Gat – Be'er Sheva – Tzefa – Tzin. 780km of track.

The intention is to permit by April 2019 17 trains per hour on each track on the Ayalon line, there would normally be two trains per hour from Jerusalem with three at peak hours.

(xxii). TEL AVIV MARATHON.

On Friday, 26.02.2016 the Tel-Aviv Marathon took place. Since it started and terminated at Hayarkon Park adjacent to the Tel-Aviv University railway station, several train schedules were adjusted to provide services for all the participants who come from all over Israel, thus letting them leave their cars at home; the services were provided prior to and after the event.

(xxiii). NOTES ON CONSTRUCTION WORKS.

Aharon Gazit writes: On 14.12.2015 I visited the work sites of the 4.7 km Gilon tunnel on the Acre - Carmiel line where two types of works took place for the first time: laying slab track in the tunnel and joining pre-welded rails of 18m into lengths of 126m before they were laid and fixed. The slab track is by Sonnevile of Switzerland; It is under responsibility of Mr. Ilan Rosenfeld the project manager from Israel Ways and is carried out by Lesico Ltd., Israel Railways Ltd.'s main contractor for track laying and rail welding.

(xxiv). NEW FARES FOR PUBLIC TRANSPORT.

The situation here is fluid – Sybil sent the table under but then a few days later noted that even further reductions were being introduced in some places, so this table is not to be taken as definitive but does show a great deal. We cannot alas show the accompanying coloured map from the leaflet nor indicate the currency exchange rates for various readers. The main thing is: Use of public transport is being encouraged!

Fares for unlimited monthly, weekly and daily tickets are as follows:

HAIFA METROPOLITAN

Round Haifa (Ring 1, yellow on map): monthly NIS 250; weekly NIS 75; daily NIS 16

Round Haifa Enlarged (Ring 1 plus purple Ring 2): monthly NIS 285; weekly NIS 110; daily NIS 25

Round Haifa South (Ring 1 plus purple Zone 2.2 plus green Zones 3.3 and 3.4): monthly NIS 350; weekly NIS 135; daily NIS 31

Metropolitan North (Zones 2.1, 3.1 and 3.2): monthly NIS 250; weekly NIS 96; daily NIS 25

Metropolitan South (Zones 2.2, 3.4 and 3.3): monthly NIS 250; weekly NIS 96; daily NIS 25

Metropolitan East (Zones 2.1, 2.2, 3.2 and 3.3): monthly NIS 250; weekly NIS 96; daily NIS 25

Haifa Metropolitan (everything): monthly NIS 495; weekly NIS 190; daily NIS 44

Round Haifa North (Ring 1 plus Zones 2.1, 3.1, 3.2): monthly NIS 350; weekly NIS 135; daily NIS 31

Hadera to Haifa (Hadera plus Ring 1, Zones 2.2, 3.3 and 3.4): monthly NIS 495; weekly NIS 190; daily NIS 44

For journeys wholly within one zone: monthly NIS 175, weekly NIS 65, daily NIS 16

TEL AVIV METROPOLITAN

Dan Region (Ring 1, yellow on map): monthly NIS 250; weekly NIS 75; daily NIS 16

Dan Region Enlarged (Ring 1 plus purple Ring 2): monthly NIS 285; weekly NIS 110; daily NIS 25

Dan Region plus North (Ring 1 plus purple Zones 2.1 and 2.2 plus green Zone 3.1): monthly NIS 350; weekly NIS 135; daily NIS 31

Dan Region plus South (Ring 1 plus Zones 2.2, 2.3, 3.2 and 3.3): monthly NIS 350;



LRT Lines

- Red Line** Rishon Lezion ↔ Petah Tikva
- Green Line** Holon/Rishon Lezion ↔ Herzliya/Tel Aviv
- Yellow Line** Herzliya/Tel Aviv ↔ Tel Aviv
- Purple Line** Yahud/Givat Shmuel ↔ Tel Aviv
- Brown Line** Lod/Ramle ↔ Rishon Lezion

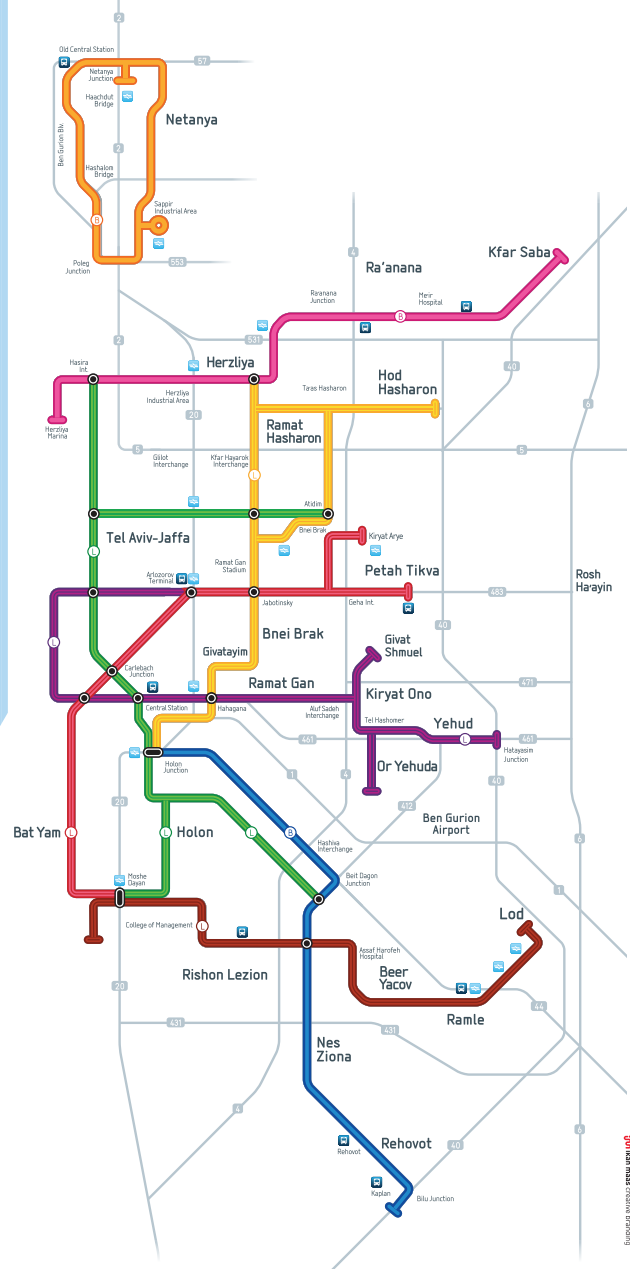
BRT Lines

- Pink Line** Kfar Saba ↔ Herzliya
- Blue Line** Rehovot ↔ Tel Aviv
- Orange Line** BRT Netanya

Legend:

- Connection Between Lines (LRT, BRT)
- Connection Between LRT or BRT & Israel Rail Line
- Central Bus Station

Tel Aviv Metropolitan area Mass Transit System



weekly NIS 135; daily NIS 31

Metropolitan East (Zones 2.2 and 3.2): monthly NIS 250; weekly NIS 96; daily NIS 25
 Metropolitan South (Zones 2.3 and 3.3): monthly NIS 250; weekly NIS 96; daily NIS 25

Dan Region Metropolitan (everything): monthly NIS 495; weekly NIS 190; daily NIS 44
 Sharon and Netanya (Zones 2.1 and 3.1): monthly NIS 250; weekly NIS 96; daily NIS 25

Hadera to Dan Region (Hadera plus Ring 1, Zones 2.1, 2.2, 2.3, 3.1, 3.2 and 3.3): monthly NIS 495; weekly NIS 190; daily NIS 44
 Ashkelon to Dan Region (Ashkelon plus Ring 1 plus Zones 2.1, 2.2, 2.3, 3.1, 3.2 and 3.3): monthly NIS 495; weekly NIS 190; daily NIS 44
 For journeys wholly within one zone: monthly NIS 175, weekly NIS 65, daily NIS 16

JERUSALEM METROPOLITAN

Round Jerusalem (Ring 1, yellow on map): monthly NIS 250; weekly NIS 75; daily NIS 16

Jerusalem Enlarged (Ring 1 plus purple Ring 2): monthly NIS 285; weekly NIS 110; daily NIS 25

Round Jerusalem plus West (Ring 1 plus purple Zone 2.1 plus green Zones 3.1 and 3.2):

monthly NIS 350; weekly NIS 135; daily NIS 31

Round Jerusalem plus East (Ring 1 plus Zones 2.2, 2.3, 3.3 and 3.4): monthly NIS 350; weekly NIS 135; daily NIS 31

Metropolitan West (Zones 2.1, 3.1 and 3.2) monthly NIS 250; weekly NIS 96; daily NIS 25

Metropolitan East (Zones 2.2, 2.3, 3.3, 3.4): monthly NIS 250; weekly NIS 96; daily NIS 16

Jerusalem Metropolitan (everything): monthly NIS 495; weekly NIS 190; daily NIS 44

For journeys wholly within one zone: monthly NIS 175, weekly NIS 67, daily NIS 16

BEERSHEVA METROPOLITAN

Beersheva (Ring 1, yellow on map): monthly NIS 175; weekly NIS 50; daily NIS 11

Beersheva Enlarged (Ring 1 plus purple Ring 2): monthly NIS 235; weekly NIS 90; daily NIS 21

Beersheva plus West and Negev (Ring 1 plus purple Zones 2.1 and 2.2 plus green Zones 3.1 and 3.2): monthly NIS 310; weekly NIS 120; daily NIS 28

Beersheva plus Southeast (Ring 1 plus Zones 2.1, 2.3, 3.3 and 3.4): monthly NIS 310; weekly NIS 120; daily NIS 28

Western Negev (Zones 2.1, 2.2, 3.1 and 3.2) monthly NIS 235; weekly NIS 90; daily NIS 21

Entire Metropolitan (all Metropolitan plus Mitzpe Ramon): monthly NIS 415; weekly NIS 160; daily NIS 44

Ashkelon plus Beersheva Metropolitan (all Metropolitan plus Ashkelon): monthly NIS 415; weekly NIS 160; daily NIS 44

For journeys wholly within one zone: monthly NIS 160, weekly NIS 46, daily NIS 16

These fares were current in January 2016. They were further reduced by approximately 14.5% on February 1, 2016.

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LIGHT RAIL

A. TEL AVIV.

(i). ROLLING STOCK: POLISH OFFER & CHINESE SUCCESS.

In 'Today's Railways Europe' issue 239 Nov. 2015 p.16 is a brief item from Poland: "At the TRAKO 2015 trade fair PESA presented images of what it tentatively calls its 'Future Tram'. Very little was revealed concerning its technical characteristics, but apparently it has been offered as a proposal in Tel Aviv and in 'a German city'.... No prototype is to be built until an order for the new tram is received.

From 'R.G.I.' 30 Nov 2015: "Changchun selected for Tel Aviv Red Line rolling stock contract. ISRAEL: Project promoter NTA has selected China's Changchun Railway Vehicles as preferred bidder to supply rolling stock for the future Tel Aviv light metro Red Line.

The contract would cover the supply and maintenance of 90 LRV cars with an option for 30 more. Further details are to be announced once the government approves the contract and an associated industrial co-operation agreement.

CAF has been selected as reserve bidder. Alstom had also been short-listed for the contract.

The 23 km Red Line will link Petakh Tikva north-east of Tel Aviv with Bat Yam to the south, with around half the route underground. It is expected to open in 2021, and seven more lines are planned.

In May NTA selected a 51:49 joint venture of China Railway Tunnel Group and local company Solel Boneh Infrastructure for a 3.1Bn NIS design-build civil works contract covering 11km of 5.5m. diameter twin tunnels and six underground stations.

Breaking news from NTA:

After two years - the time it took the LRV tender - NTA announced on Thursday, 26.11.2015, that CNR winning the tender for manufacturing, supply and maintenance of 90 LRV cars + option for additional 30 for the Red Line. Additional bidders who were selected as best and final (but did not win) were Alstom and CAF. The winner has still to await the government approval, but it is unlikely that anything is going to be changed; more details about prices and tender values to follow upon publicity.

Attached here is the letter of winning announcement sent to CNR by NTA legal department.

NTA Tender 019/2012. Procurement of Light Rail Vehicles. Notice of Tender Award. Changchun Railway Vehicles Lo. Ltd. ('CNR'). Letter 26.11.2015: "Dear Mr. Zhou Chuanhe,

On behalf of NTA I am pleased to inform you that NTA's tender committee convened today and selected your Bid as the winning proposal in the above referenced Tender.

For reference purposes your winning Bid is based on the following prices [NB these are all obscured]:

Unit price for 1 cabin LRV (K1):

Unit price for 2 cabins (K2);

Unit price for ordering 10 Option 1 cabin LRVs (P1)

Unit price for ordering 30 Option 1 cabin LRVs (P2)

Maintenance price per LRV kilometre during early operation (VkmA)

Maintenance price per LRV kilometre during full service (VkmB).

Please note that in accordance with ITB 37.4 Construcciones y Auxiliar de Ferrocarriles (CAF) was elected as 'second eligible' bidder...."

(ii). BROWN LINE PROGRESS.

SOUTHERN PORTION OF TEL AVIV RAIL LINE PLAN PASSES HURDLE:

By Niv Elis. 'Jerusalem Post' 02.12.2015 p.18:

"The Finance Ministry's committee for national infrastructure on Monday approved plans for the southern portion of a second light rail in the greater Tel Aviv area, passing it on for a 60-day period of public comment and local approval.

The Green Line is the second of eight lines in a master plan for improving public transportation in and around the Tel Aviv Metropolitan Area, and would travel from Herzliyya to Holon and Rishon leZion, with stops in Tel Aviv along the way.

The plans for the southern portion call for roughly 17km of track - 2.5km in Tel Aviv, 4.2km in Rishon leZion and 10.3km in Holon. From the Lewinsky station in Tel Aviv it will continue to Sokolov Street in Holon where it will split into two branches. The western branch will continue through Holon and into Rishon leZion, where it will connect with the Red Line, the Moshe Dayan train station and, in the future, the Brown Line. The eastern branch will run along Jerusalem Boulevard, cross Highway 4 and end near High-

way 412. The central portion of the track has already been approved and the northern portion is scheduled for discussion in roughly six months.

The Red Line, which is already under construction, will run from Petah Tikva to Holon and include nine underground stations. It is projected to be completed in late 2021. Owners of businesses along the Red Line complain that the construction has reduced foot traffic and sales, and is putting their livelihoods in danger. The government has promised to help them make it through the tough construction period and predicted that there would be a big payoff when the rail is up and running."

(iii). NTA tender No. 2015/197: (25.11.2015) Providing Design Services for the alignment of the Eastern section of the Purple Line: This surface section is to start south of the Scheba medical centre, crossing further on Savion road crossing, running between the cities of Or-Yehuda and Yahud-Neve-Monoson, and ending at Tayasim (Pilots) crossing; the intersection of road 461 along which it runs west-east, and road 40 north-south, north of Ben-Gurion Airport. Latest date for submission of proposals: 28.12.2015.

(Aharon adds a Note: "An irony of history: During World War 2 a railway line was laid from Wilhelma in the vicinity of Ben-Gurion airport (then called Lydda airport) to the military complex then called Tel-Litwinsky, today Tel-Hashomer (adjacent to Scheba medical centre) in order to serve the US forces; it was therefore called the "American Railway". It existed until the outbreak of the 1948 Independence War and was used for bringing wounded soldiers from near Ramla to Yahud where the small station building still exists as a garage (inside, one of the dismantled rails is used as a beam!). The other sections could be used as a result of war damages.

There were still rails there until the beginning of the 1960's when the whole line was dismantled in favour of widening road No. 461, building factories and residential areas etc. We can only imagine how much money could have been saved had the right of way been secured; but who in those days thought of anything like LRV?")

(iv). NTA tender No. 2015/0186: Purchasing and maintaining licences of Qlikview of Netherland BV QlikTech as well as components, support and upgrading services: The contract is for 12 months with optional extensions of up to additional 60 months. Latest date for submission of proposals: 17.12.2015.

(v). NTA tender No. 153/2015: Providing consultancy services for electromagnetic radiation: The contract is for 60 months + optional extensions of up to additional

36 months. Latest date for submission of proposals: 01.02.2016.

(vi). NTA tender No. 158/2015: Providing consultancy services for smart card system: The contract is for 60 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 18.02.2016.

(vii). NTA tender No.2015/178: Providing services of supply and installing automatic machines for selling drinks and food at NTA offices: The contract is for 12 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 07.12.2015.

(viii). NTA tender No. 2016/0008: Recruitment of Professional Personnel to serve as Shadow Operator for the NTA system. NTA is seeking to retain the services as consultants of four individuals for the following positions: Operations Manager, Line & OCC Manager, Rolling Stock Manager and Systems (Signalling, Communications, Traction Power) Manager, all as specified in the tender documents.. Bids by 7th. March 2016...

(ix). NTA tender No. 2016/0011: Performing maintenance works on Traffic Light Systems and green wave on the alignment which NTA will put its own traffic lights system in the cities of Ramat-Gan and B'nei-Brak: The contract is for 60 months with optional extensions of up to additional 24 months. Latest date for submission of proposals: 21.02.2016.

NTA tender No. 153/2015: Providing consultancy services for electromagnetic radiation: The contract is for 60 months + optional extensions of up to additional 36 months. Latest date for submission of proposals: 01.02.2016.

B. JERUSALEM.

(i). MORE ON THE ASSAULT ON A GUARD.

The story continues. From 'Times of Israel' 19.11.2015.

"The Jerusalem District Prosecutor charged a 14-year old Palestinian from the Beit Hanina neighbourhood with attempted murder in Thursday in the November 10 stabbing. Attack on the light rail station of Pisgat Ze'ev which injured an Israeli security guard. The teen was also charged with holding a knife. The indictment contends that the suspect decided to carry out an attack as revenge for the death of a relative, who was himself killed while carrying out a stabbing attack. The second suspect in the attack is the teen's 11-year old cousin, who was shot and injured by a guard during the attack. The 14-year old is accused of convincing his cousin to join him in the attack. The two allegedly entered the light rail at the Damascus Gate station after failing to find a suitable victim in the Old City In the train they searched for poten-

tial victims. When a light rail security guard entered their train car, the two allegedly decided to make him their first target and afterward attack other travellers. When the train was passing the Shuafat stop in East Jerusalem, the 14-year old allegedly got up from his seat and started stabbing the guard with a knife, while the younger cousin joined in, attacking with a pair of scissors. After the attack, an uncle claimed that the boys were innocent and may have been framed. The stabbing came amid a spate of attacks over recent weeks that ramped up security fears in Israel and the West Bank...."

Further to the item in 111:06: The story of an attack on a guard on the Light Rail, the following appeared in 'Jerusalem Post' Friday 27.11.2015 p.4. By Daniel K. Eisenbud:

"Palestinian Boy attacked Light Rail guard 'to die a martyr'.

"The 11-year old Palestinian boy who stabbed a light-rail guard with his cousin, 14 in Jerusalem's Pisgat Ze'ev two weeks ago told the Shin Bet (Israel Security Agency) that the two were motivated by revenge to 'die a martyr', a transcript of his interrogation revealed.

In the transcript, released by the Shin Bet on Thursday, the unidentified child from Shuafat said he met his cousin on November 11 at the entrance to their school, where they were denied entry because their parents had not paid their tuition.

'My cousin told me that on the way to school he wanted to carry out a stabbing attack, but didn't succeed because all the people were senior citizens,' he said, noting that the two did not want to harm the elderly. 'We travelled from Shuafat to Damascus Gate in order to stab a soldier, but didn't do it because the soldiers were in groups and we didn't find one standing alone.

Then [my cousin] told me, 'Let's do an attack together to avenge the death of Muhammad Ali,' the boy said, referring to their terrorist cousin, 19, who was shot dead on October 10 by Damascus Gate after stabbing two police officers there.

While the 14-year old had a knife in his bag, the 11-year old said he did not have a weapon, so he bought scissors at a local store before boarding the light rail to 'look for Jews to stab.' When the boys saw two security guards board the train, he said they waited until one of them left the train to improve their odds of killing one. CCTV footage released by the police shows the children anxiously waiting to attack the lone guard.

'I stabbed him in the head and my cousin stabbed him in his chest and stomach until the guard pushed me and fired three bullets in my stomach,' said the 11-year old boy, who was treated at the

scene by Magen David Adom paramedics, while his cousin was subdued by passengers. The unidentified guard, 25, who was lightly wounded, was able to shoot the 11-year old boy.

Near the conclusion of his interrogation the boy said, 'I wanted to die as a shahid [martyr], but now I understand I made a mistake and I am sorry. I want to be in school like any normal person,' he continued. 'I don't want to resist the occupation any longer. I don't want to kill. ... I'm a minor and I should go home.'

In a separate interrogation his older cousin cited the occupation and situation in Gaza as his motivation for carrying out the attack. 'I wanted to kill the Jews who are torturing us', he said. Due to the 11-year old's age, the state will ultimately be forced to release him to the custody of his parents. His cousin, however, is old enough to be prosecuted and sentenced to a juvenile detention facility. Following the attack, legislators submitted a bill to lower the minimum age of prosecution."

On 9th. Dec, came the next stage in this legal saga! By Tamar Pileggi in 'Times of Israel':

"The 11-year-old Palestinian boy who stabbed a guard on the Jerusalem light rail train last month was transferred to a juvenile detention center upon his release from hospital Tuesday, as the state grapples with how to handle the underage assailant. Under current Israeli law, Ali Alkam, a 6th grader from East Jerusalem, is below the age of criminal responsibility, which is 12.

The Ministry of Welfare and Social Services ordered Alkam to the closed rehabilitation facility after obtaining a court order, the Walla news website reported.

"We won't be able to hold him there for long, ultimately there will be no other choice but to release him," a source familiar with the case told Walla. The source highlighted the state of limbo facing Alkam: he is too young to be defended by Israel or the Palestinians, or receive punishment.

"The state has absolutely no idea what to do with him," he added.

Ali is the youngest assailant arrested to date in the current upsurge of Palestinian attacks on Israeli targets. While he is too young to face charges or go to a juvenile detention facility, his 14-year-old cousin, Moawiyah Alkam, who joined him on the stabbing rampage, is facing charges of attempted murder.

Ali and Moawiyah attempted to murder a security guard on Jerusalem's light rail on November 10. Moawiyah stabbed the guard in his upper body with a knife he'd brought from home; Ali stabbed him in the head with a newly purchased pair of scissors. The guard, who was lightly-to-moderately injured in the attack, shot Ali in the stomach.

The two cousins confessed to Shin Bet interrogators that they carried out the attack in revenge for the death of their cousin who was recently killed.

"I wanted to die as a shahid [martyr] but now I understand I made a mistake and I am sorry," Ali said told investigators in the published transcript of the interrogation. "I made a mistake. I want to be in school like any normal person. I don't want to resist the occupation any longer."

Moawiyah also confessed to carrying out the attack, but said he did not mean to kill anyone.

According to Israel's penal code, offenders charged with terrorism cannot be incarcerated until the age of 14, however, a bill that would lower the minimum age of incarceration to 12, has gained traction in the Knesset as the number of juvenile attackers has risen sharply in recent months."

On 14.12.2015 in 'Times of Israel':-

"As a result of the ongoing threat of terrorism in the nation's capital, Transportation Minister Yisrael Katz on Sunday approved the deployment of 300 additional security guards for Jerusalem's public transport, the Ma'ariv news site reported. The guards and a number of security vehicles will be sent out to bus stops and Jerusalem Light Rail stops throughout the city. "The very deployment and correct use of the guards can bring the threat to a minimum and even prevent it," Katz said.

In the first few weeks of the ongoing violence, a similar group of guards and IDF soldiers were sent to protect Jerusalem's public transportation system, but they were eventually taken off that duty. Now, however, they will return. The guards, all former combat soldiers, will be given uniforms, pistols and radios in order to protect passengers. They will also be given legal permission to conduct searches of those they determine to be potential security risks.

In October, soon after the start of the ongoing violence, Public Security Minister Gilad Erdan approved an expanded "stop and frisk" policy to allow law-enforcement officials the ability to carry out searches at just the slightest suspicion of a threat.

The plan was approved by the security cabinet in light of the ongoing terror, which has been predominantly centred around Jerusalem and the West Bank. "Your mission is to act with determination and responsibility," Katz told the guards. "On the one hand to be determined in order to prevent, in any way, injury or threat to travellers on public transportation. But on the other hand, to act responsibly." "

(ii). KORANIC ENLIGHTENMENT.

On the semi-demolished tram stops at Es-Sahel and Shuafat (just stubs of seats and machines remain on the tidy platforms – the trees were NOT damaged)

הרכבת

the Editor found taped the following message in Arabic, Hebrew and English:-

"We settled the children of Israel in a defined place and gave them good tidings. They did not disagree among themselves until Enlightenment was obtained. We will settle the differences between them in the End of Days. Koran Jonah 93."

(iii). SECOND LINE APPROVED!

Jerusalem Municipality approves a second light rail line - the 'Blue Line' to connect Gilo, Malha, Emek Rafaim and Ramot; Also, a third 'Green Line' connecting Mt. Scopus is awaiting approval. By Daniel K. Eisenbud, in 'Jerusalem Post', 28.01.2016

"Construction of a new, 20-kilometre-long second light rail line was approved by the Jerusalem Municipality's Planning Committee, clearing the way for final approval by the regional committee.

The Blue Line, as it has been named, will serve up to 250,000 residents from Gilo in the south to Ramot in the north. A second part of the line will also traverse Malcha, Emek Refaim and Ramot.

Presently, the Red Line, which became operational in 2011, services tens of thousands of residents and visitors each day from Pisgat Ze'ev to Mount Herzl. Transportation Minister Israel Katz lauded the development, adding that the high-speed, 28-minute railway to Tel Aviv under construction will complete the revolutionizing of transportation in the ancient city. "This is a happy day for residents of Israel," said Katz in a statement.

Jerusalem Mayor Nir Barkat, who has long championed the nascent light rail system, echoed Katz's sentiments that the city's burgeoning transportation infrastructure is taking it firmly into the 21st century. "Jerusalem is gaining momentum in transportation development that sets it apart as an advanced city," he said. "The city's residents will be able to enjoy shortened travel times, fewer traffic jams, cleaner air, and exciting urban renewal."

According to Nadav Meroz, in charge of implementing the Blue Line, the project will take several years to complete. "The planners hope this advanced and efficient transportation network... will allow residents... to leave their cars at home and use modern and clean transportation to save valuable time."

Meanwhile, a third route, to be called the Green Line, which will run 20km. from the University and Hadassah Hospital on Mount Scopus to Gilo, is awaiting approval, the municipality said."

The Blue Line will start in the Gilo neighbourhood (south Jerusalem) and will run on Hebron Road, past the Khan Theatre (adjacent to the historical railway station), Keren Hayesod, King George the

V Street; here, on the section between Kikar Tzarfatit and Talita Kumi (once a Christian orphanage, later demolished in favour of an apartment hotel and a mall) private cars will be allowed to run; from Talita Kumi and the corner of King George Street and Jaffa street, it will become a pedestrian area where only the LRV will run (as on the main part of Jaffa street). The line will cross the Red Line at Jaffa street and enter a 1.2 km tunnel which will end at Golda Meir Avenue west of the ever clogged Bar-Ilan junction, and then continue to the Ramot neighbourhood (north-west Jerusalem).

Another arm will run from the Malcha railway station through the Sport City, Katamon, Emek Refaim (German Colony) then merging with the other arm from Gillo.

The Blue Line will thus have an interface with the Red Line at the city centre (the corner of King George the V street and Jaffa street), and with the Green Line at the Malcha and Gillo neighbourhoods.

While the Blue Line is planned to serve 250,000 passengers/day, the future lines will serve about 600,000 passengers/day. The line will be served by huge fleet of 90 cars = 45 trains which will provide a frequency of 3 to 4 minutes intervals at rush hours. The line would be 20km. Long with 42 stops.

While the extensions of the Red Line to Neve Ya'akov (the extreme northern point of Jerusalem), to Hadassah Ein-Kerem medical centre, and to Mount Scopus and to Givat Ram (Hebrew University campuses) should be completed by 2021, the other lines should be completed by 2026.

When completed, half of the city population will be living no further than 500m from the nearest LRV station.

Aharon Gazit comments: *"This brings a hope that the old line between Jerusalem and Beit Shemesh may possibly be operated in the future by an LRV service."*



Computer image of the new northern access at Tel Aviv Merkaz - Savidor station currently under construction. This will include lifts and escalators to the platforms. Note how empty the road seems to be, and the greenery! (Pictures courtesy of IR via Aharon Gazit.)



RedLine deopt



Red Line

(iv). PAY AGREEMENT.

An agreement has recently been achieved and signed between the General Workers' Union, the concessionaire CityPass and the LRV employees' union according to which the salaries of the drivers will be raised by 21.5% within two years, while those of other employees will be raised by between 5% and 20% over the same period; they will be paid monthly instead of daily. The contract is valid until June 2019.

(v). INFORMATION TEAMS.

Due to the reform in public transport services which include buses, trains, and LRV, CityPass has put special teams on all important stops to explain the changes; particularly fare reductions.

C. HAIFA-NAZARETH TRAM/TRAIN PROJECT.

Yefe-Nof of Haifa, which is in charge of the project, has given it over to the District Council for review.

D. A NEW SCHEME FOR RISHON LE-ZION.

On 22.02.2016 the municipality of Rishon Le-Zion announced that it is inspecting an offer to build an elevated horizontal "lift" to link the station of Moshe Dayan (Rishon Le-Zion West) with what is called "The 1000th site" - a new huge combined residential, business, and entertainment complex to be built just west of the station.

The idea of the South Korean company Sky Cube is to operate up to 20 electric cars on the elevated track, to carry 1,100 passengers/hour in the first stage and up to 6,000 passengers/hour later which will mean 1 million passengers/year. According to the plan, there will be up to 5 km of tracks on pillars of 5m high and 0.9m diameter each; the cost of 1 km is estimated at \$20 million. The intention is to build such lines to neighbouring cities too to enable people to reach the railway station easily.

E. BE'ER SHEVA. The LRV fashion comes to Be'er-Sheva too:

The fashion for LRT lines has come to Beer Sheva as well. During the opening of the new footbridge at Universita station on 12.02.2016 the mayor, Rubic Danilovich and Transport Minister Mr. Israel Katz announced agreement to start design work on an LRV system for the city of Beer-Sheva. According to the mayor the city now has a population of over 200,000 and needs the LRV system which is intended to serve not only the city but also the surrounding areas.

The intention is to have all the lines running underground in order to avoid disruptions with other transport mode. Despite the ceremony, many at the municipality believe that it will take some time even for the beginning of design.

F. GENERAL PUBLIC TRANSPORT FARE REDUCTIONS.

From 'Jerusalem Post' 30.11.2015 p.6. (By Sharon Udasin): (And see item in 'News from the Line'):

"PUBLIC TRANSPORTATION DISCOUNTS TO EXPAND STARTING TOMORROW:

Some 2.5 million travellers will benefit from expanded public transportation discounts beginning on Tuesday, the Transportation Ministry announced on Sunday. Transportation Minister Israel Katz signed an order on Sunday indicating that as of December 1 many more people will be able to travel on bus and trains either free of charge, or with ticket reductions up to 50%.

Chief among those to benefit will be about 2 million children between the ages of 5 and 18, who will receive 50% reductions on all forms of public transportation, the ministry said. Previously, children received such concessions only on urban and regional travel. About 28,000 disabled people and national insurance beneficiaries who receive income supplements will be eligible for 33% discounts for all public transportation use, according to the ministry announcement. Up until now, national insurance beneficiaries received reductions on trips under NIS25.

Disabled IDF veterans, who were never before qualified for transportation discounts, will also be entitled to 33% reductions, the ministry said.

Meanwhile, blind passengers will receive full exemption from bus and train fares, an upgrade from their current 50% discount on routes that cost up to NIS 16.5, the announcement added. Those accompanying blind passengers can receive a 50% discount.

National Service volunteers, as well as students involved in pre-military activities, will be able to use public transportation free of charge, except for journeys to Eilat, the ministry said. Soldiers in a 'service without payment' portion of their military service will also be able to travel free of charge except to Eilat, having previously only receiving discounts on trips of up to NIS 11.5.

A final change in the fare structure will enable parents to travel with strollers at no extra cost, except between the hours of 7am and 9am – the 'rush hour of public transportation', the ministry added."

E. GENERAL: ROAD DEATHS.

An editorial in 'Jerusalem Post' for 02.12.2015 lambasts Transport Minister Katz for agreeing to raise the speed limit on Highway 6 from 110 to 120kph (albeit police don't really start enforcing speeds until vehicles go about 20kph over this limit.) "The decision will almost certainly result in more dead, maimed, paralysed and disabled drivers, passengers and pedestrians of all ages....."

...."Over the past few years there has been a gradual increase in the number of road deaths in Israel. Until 2011 the number of men, women and children killed on the roads was steadily dropping. But, starting in 2012 the trend reversed course. That year, 290 people were killed on the road; in 2013 309 died and in 2014, 320. According to 'Or Yarak', ['Green Light'], a road safety organisation, as of November 22, 323 people had died on the roads this year. At this rate the number will reach more than 353 in 2015. We are slowly approaching the level of road deaths of a decade ago, which hovered around 400 a year on average. For the sake of comparison, between September 13 and November 30 – a period of a month and a half roughly covering the recent wave of Palestinian terrorism – 22 people have been murdered in stabbings, vehicular attacks, shootings and other terrorist violence, according to Magen David Adom. Assuming the present rate, about 45 people are killed on the road in a month-and-a-half, or about twice as many as those murdered in terrorist attacks.

What happened? In November 2011 Katz decided to raise the maximum speed limit from 100kph to 110kph. Shortly after this decision, death tolls started climbing. Now, instead of learning from his mistake, Katz is actually continuing with this homicidal policy. If we dedicated even a fraction of the emotional involvement and media coverage to the bloodshed on our roads that we do to terrorist attacks, we should be well on our way to reducing unnecessary road deaths to a minimum. The Transportation Ministry says the increase in the speed limit from 100kph to 110kph did not result in more fatalities on the roads on which the speed limit change was made. In fact, the ministry says, the number of road injuries and deaths actually fell on certain sections of the roads. The Ministry also said that the upcoming change on Route 6 was made possible after road safety improvements were implemented. However, research by Prof. Elihu Richter, former head of the Injury Prevention Centre at Hebrew University – School of Public Health.... shows that the higher speed limits have resulted in an additional 40 to 60 deaths per year..... A 10% increase in speeds of impact results in a 45% climb in fatalities among passengers and pedestrians, according to Richter..."

TENDERS.

A. TENDERS ISSUED.

(i). RFI-Horizontal balancing machine for rail wheel sets.

(ii). International tender No. 1510: For the supply of electric hand dryers for toilets of passenger coaches.

(iii). Tender No. 21526: Frame agreement for providing preliminary, statutory, early, and detailed planning and top inspection on building railway lines: The railways intend to select up to 10 bidders. Latest bid for submission of proposals: 03.12.2015.

(iv). Tender No. 11511: Supply and maintenance of a mobile system for emptying toilets of passenger cars: The contract is for 24 months with optional extensions of up to additional 36 months. Latest bid for submission of proposals: 18.12.2015.

(v). Tender No. 11501: Providing building, operating, training, and maintenance services for the railways' locomotives' drivers' simulator system: The contract is for 120 months with optional extensions of up to additional 120 months. Latest bid for submission of proposals: 29.02.2016.

(vi). Israel Railways Ltd. Tender No. 21517: Carrying out works of the tracks nearby areas rebuilding at Pleshet Triangle (near the siding to Ashdod port: Latest date for submission of proposals: 17.12.2015.

(vii). RFI: Building and maintaining a monitoring for all level crossing barriers systems on the rail network: Currently, the barriers and their mechanisms are from Safetran and Scheidt & Bachman; the railways' intention with the requested system is to link them with its Motorola communication system. Latest date for submission of proposals: 28.01.2016.

(viii). Israel Railways Ltd. tender No. 21507: Building the new southern site DP 4 at the Beer-Sheva depot and operational centre. Latest date for submission of proposals: 12.01.2016.

(ix). Tender No. 41502: Manufacture and Supply of Various Types of Turnouts, Diamonds, Expansion Switches installed with Various Types of Bearers and on Slab Track.... Submission date postponed to 23.12.2015.

(x). Tender No. 41511: For the Supply of Testing Equipment for Vacuum Toilets in Rolling Stock. Bidder must be the manufacturer and supplier of the proposed Devices and from 2012... Bidder has supplied at least 10 devices for use in vacuum toilets in Rolling Stock.... Proposals to be submitted by 05.01.2016."

The extended version includes: "The devices shall be used to inspect the electrical connection, the normal function of valves, detect any kind of problems as a result of a defect and/or malfunction in the

flushing cycle as well as any leakage of air as a result of a defect and/or malfunction in the vacuum and air pressure systems of the toilet units assembled in ISR's passenger coaches. Upon requirement, the supplier should supply four devices to the following locations in Israel: one each to Kishon site (Haifa); Hof Shemen site (Haifa); Lod site; Beer-Sheva site. The device should be assembled in wheels provided with individual manual brakes in order to allow IR to move it inside the depots. The device shall be used on present IR's passenger coaches toilets units but also on future rolling stock to be purchased and/or operated by IR and because of that it should be easily adaptable to the different types and models of vacuum toilets in the world today. Furthermore the supplier is requested to list and detail on which ones the device is not."

There follows a list:

"Siemens single deck: Toilet system type Frensissemi.

Bombardier double-deck: type Evac.

Environmental conditions: Maximum work temperature 70°C, minimum work temperature -5°. Humidity: until 90%. Water: with high hardness."

(xi). Tender No. 21523: Construction and upgrading three control and communication buildings and 12 km of communication systems between south of Nahariya and Acre, and between Zevulun junction (Paz bridge) and Bat-Galim station in Haifa. Latest date for submission of proposals: 17.12.2015.

(xii). Tender No. 31508: Supply of LED lamps for locomotives:

The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 15.12.2015.

(xiii). Tender No. 21534: Carrying out trackworks, including: track laying, upgrading, rebuilding, and double-tracking: The contract is for 60 months with optional extensions of up to additional 60 months. Latest date for submission of proposals: 11.02.2016.

(xiv). Israel Railways tender No. 11546: Carrying out segmentation and separation and maintenance services on the railways' internal communication systems: The contract is for 36 months with optional extensions of up to additional 96 months. Latest date for submission of proposals: 04.02.2016.

(xv). Israel Railways Ltd. tender No. MS/RC/2016/1: Operating a 335sq.m. building and an 1,800 sq.m. parking area at Tel-Aviv Savidor-Central station: The purpose is to provide passengers accessory services as well as commercial activity. The contract is for 72 months. Latest date for submission of proposals: 18.02.2016.

(xvi). International tender No. 41507: Rail Grinding Services. To include initial 50km of new rail grinding, 20km of corrective/re-

profile grinding and 170km of preventative cycle grinding – removing defects of up to 0.1mm on new rails, fitting a rail-head profile for rails with a surface defect depth equal to 0.25mm, and periodic regrinding to this same specification. Minimum of 1.0km per hour for new rails, 200m per hour on corrective and 350m per hour for preventative maintenance cycles. Allowing for 15 7-hour shifts per month or 20 5-hour shifts (meaning here the 'spark time' on site) this would cover 36.75km or 35km respectively per month.

(xvii). International tender No. 41512: for installing ETCS/ERTMS System on IR.

The intention is to install ERTMS in three stages:

Stage 1 would be Herzliyya – Tel Aviv – Jerusalem HaUma – Modi'in (but excluding Lod) 213km of track, 89 route km.

Stage 2 would be Nahariyya – Carmiel – Beit She'an, Kfar Saba – Herzliyya – 440km track km.

Stage 3 would be Lod – Rosh HaAyni – Ashkelon – Kiryat Gat – Be'er Sheva – Tzefa – Tzin. 780km of track.

The intention is to permit by April 2019 17 trains per hour on each track on the Ayalon line, there would normally be two trains per hour from Jerusalem with three at peak hours.

(xviii). Tender No. 11602: Providing management services for the railways' Facebook and Instagram: Latest date for submission of proposals: 03.02.2016.

(xix). Tender No.21531: Building the Kfar-Menakhem railway station:

Note: the station is to be located near the settlement of the same name and is intended for the surrounding inhabitants; it is south of Na'an junction on the line to Beer-Sheva. Latest date for submission of proposals: 22.02.2016.

(xx). Tender No. 41513: For the Supply of Reach Stacker and Fork Lift Vehicles. The former should have 42,000kg capacity and the latter 32,000kg.

(xxi). Israel Railways Ltd. tender No. 11604: Supply, installation, and maintenance of non-electronic boards and signs at railway stations and sites: The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 04.04.2016.

(xxii). Tender No. 11610: Producing Images, Video, Multimedia, and Stills films: The contract is for 12 months with optional extensions of up to additional 3 years. Latest date for submission of proposals: 09.03.2016.

(xxiii). Tender No. MN/KB/02/15: Modi'in Arch: Carrying out track infrastructure works, bridges, car parking area, enlarging a station and additional works: Works include: enlarging Modi'in Outskirts station, two additional tracks, railway bridge No. 17.1, an overhead pedestrian bridge and a car parking area adjacent to high-

way No. 431 and south of the station. This important link must be ready to the date of starting services on the A1. Latest date for submission of proposals: 28.03.2016.

(Note: this tender is particularly important as it deals with linking the city of Modi'in with the A1 fast link to Jerusalem as an entity for itself thus enabling the citizens of Modi'in and Jerusalem to reach each other within 18 minutes; currently, there is no rail link between the two cities.) (xxiv). Tender No. 11538: Providing Diesel Generator maintenance services at the railways' sites. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 24.03.2016.

Tender No. 11525: Providing operational, maintenance, cleaning, degradation, gardening, and additional services for the railways' management at Lod to be opened in mid-2016: The contract is for 3 years with optional extensions of up to additional 7 years. Latest date for submission of proposals: 31.03.2016.

Tender No. 11609: Providing refreshments and meals for the railways' employees and guests: The contract is for 1 year with optional extensions of up to additional 3 years. Latest date for submission of proposals: 14.03.2016.

B. TENDERS AWARDED:

(i). Winners of tender No. 11412: Supply of water-based firefighting systems for stations and other railway sites:

In the north - Keren Esh C Ltd. at \$38, 950 annually.

In the south - Lehavot Services Ltd. at \$46,641 annually.

(ii). Winner of tender No. 11415: Providing inspection and mechanical engineering design services for rolling stock department. Ziv Av Engineering Ltd.

(iii). The following local suppliers won Tender No. 31505 for supply of diesel and electric forklifts: Eagle forklifts Ltd.; Union Motors Ltd. (Toyota); Ekmol Ltd.; Kedma Transportation Equipment Ltd.

(iv). Tender No. 11302: A quantitative survey for measuring the satisfaction of the railways customers; Winner: Marketing Information Ltd.

(v). Tender No.11301: Providing implementation services for the railways' employment; Winners: Hebrew Work, Challenge, Singer, L.M. Manpower.

(vi). Tender No. 11309: Providing special bus services to/from stations; Winners: Roses Haulers, Bon-Tour.

(vii). Tender No. 11312: Creating suppliers' data for development of training systems and technical writing for railway technical professions and assimilating them in the railways' system.

Winners: organizational development: Changes Ltd., Lotem strategies Ltd., Blu-mental.

Industrial management: Niram Gitan, Eshed, Aviv Management.

Human resources: Gaus Institute, Lotem strategies Ltd., AKT.

(viii). Tender No. 11321: Providing services of producing events and shows for the railways' employees; Winners: Eshed Tours, Montabar.

(ix). Tender No. 11322: Providing services of consulting, guiding, and followup for assimilating the service concept in the railways; Winners: Artists Ltd., Eldar Ronen, Dr. Gilad Ronen.

(x). Tender No. 11520: Operating a telephone information service for the railways; Winner: Bezeq On-Line Ltd. (Israel Telecom).

(xi). Tender No. 41505 for the supply of load box (for testing and run-in after overhaul) of railway diesel engines. The railways have announced that NRE won the \$177,000 tender.

(xii). Tender No. 11421: for providing security services, security checks, luggage scanning at railway stations, on trains and at Lod complex, and operating security patrol cars along tracks. The railways have announced that the winners are:

For the southern section: White Snow Ltd. For the northern section: Civil Intelligence Ltd.

(xiii). The railways have announced that the winner of the EURO 900,600 tender No. 41405 for Manufacture and supply of Underfloor Wheel Lathe is HYT Engineering CO. RYT. Ltd.

C. TENDERS DELAYED / POSTPONED.

i Tender 41508 for supply of Road/Rail Pick-Up Vehicles: postponed to 28.01.2016.

It was later postponed again (on 27.02) to 98.903.2016, with the following note:- "Question/Request: In relation to Section 3.7.3, ISR was requested to clarify whether ISR will accept an engine that meets the minimum EURO IV standards and/or equivalent standards for emissions and Israel pollution standard.

Answer: ISR has reviewed the request and decided to amend section 3.7.3 meaning: "The engine shall meet the minimum EURO IV standards and/or equivalent standards for emissions and Israel pollution standard

(ii). International tender No.41504: Bids postponed to 20.01.2016.



112:07.

OTHER MIDDLE EAST RAILWAYS.

A. IRAN.

(i). **ELECTRIFICATION.** From 'R.G.I.' 27.11.2015: "RZD International signed a contract to electrify the 495km route from Garmsar to Incheh Borun on the border with Turkmenistan during a visit by Russia's President Putin to Tehran on November 23. The 36-month contract is worth an estimated €1.2Bn and will be financed through a €5Bn Russian export credit intended to support various Iranian infrastructure projects. The scope includes the design, supply of materials and construction of the 25kV 50Hz electrification, as well as tunnel enlargement and other works to increase capacity on the route, which has 95 tunnels and 32 stations.

In June Iranian and Chinese officials finalised an agreement to finance the previously-announced electrification of the Tehran – Mashhad line, with 85% of the €1.9Bn cost to be financed through Chinese loans, the rest by the Iranian government. Completion is expected to take 42 months."

(ii). 'JEWEL OF PERSIA' SPECIAL TRAIN.

A sad note in 'Today's Railways Europe' 240 (Dec. 2015) p.63 states: "The Budapest-Tehran 'Golden eagle' Danube Express luxury train departed from Budapest on 5 September, but the programme had to be substantially changed due to the refugee situation in Budapest and closure of the Turkish-Iranian border following unrest by Kurds and attacks on the railway. The 'Jewels of Persia' service departed Budapest from the Railway Museum and operated with MÁV Nostalgia's stock as far as Kayseri from where passengers were flown to Iran. The Persian part of the programme was operated with local stock. As usual, the first leg of the trip from Budapest to Kecskemet via Lajposmizse was worked by MÁV PMLI's 2761 017 (former MÁV M61 017). Meanwhile Austrian president Heinz Fischer has visited Iran with a delegation of economists, including railway enthusiast Gottfried Rieck who has been involved in the preservation of Emperor Franz Josef I's private train (Hofsalonzug). During this visit an accord was signed by Mr. Rieck and Iranian railway chief Mohammed Khalafi to create a 'Persian Phoenix' luxury train in Iran."

Anyone interested can check out the website <http://www.goldeneagleluxurytrains.com/>

Friendly members of their PR department sent me the following: "In late August, Golden Eagle Luxury Trains.... were dealt a blow when they were informed by Turkish railways that a section of the railway network in the Kurdish area of eastern Turkey would be closed for the foreseeable future, putting their popular Iran holidays in jeopardy. The closure left their luxury private train, the 'Golden Eagle Danube Express', unable to access its route eastwards to Iran. However their flagship train, the 'Golden Eagle', which is based in Moscow, will take up the mantle in 2016, journeying from Russia, via the Silk Road, to the ancient lands of Persia for an unforgettable and unique new adventure.

Since the withdrawal of the Service, Golden Eagle Luxury Trains had been busy investigating a series of alternative options to circumvent the situation including the addition of flights and touring by coach, or the use of an Iranian pilgrimage train. When the use of the Golden Eagle was initially investigated, it was thought that it would not be possible due to the incompatibility of Iranian bogies (wheelsets) with the Russian carriages,

which would have meant transporting suitable bogies from Belarus – an incredibly costly exercise. However, a solution was found when a set of compatible bogies were sourced in Turkmenistan, enabling the Golden Eagle to enter Iran.

With the lifting of economic sanctions and the FCO relaxing its advice against travel to most parts of the country, Iran is set to be a popular travel hotspot for 2016. Having offered their first journey to Iran in 2014 (which sold out within weeks of launch) Golden Eagle Luxury Trains were trailblazers to this mystical and culturally fascinating destination.

'Persia and the Silk Road': Step aboard the Golden Eagle in Moscow to begin this epic 18-day voyage along the Silk Road and through Persia to Iran's capital, Tehran. Passing through Russia, Kazakhstan, Uzbekistan and Turkmenistan en route to Iran, this pioneering trip reaches areas only accessible by train and rarely experienced by the Western visitor..

'Heart of Persia' – 14-day adventure, starting and finishing in Tehran and visiting Sari, Mashhad, Rayen, Mahan, Yazd, Isfahan, Shiraz, Persepolis, Kashan, Shustar, Choghazanbil and Susa..... an additional highlight will be the opportunity to travel on an Iranian pilgrimage train for two sections of the journey on the spectacular mountain railways, including one overnight....."

(iii). RAIL TOUR.

FarRail Tours is operating a railway enthusiasts' tour of Iran 8th.-22nd. May! Initial information: "We will explore the fantastic, mountainous lines Andimeshk – Doroud, Garmsar - Pol-e Sefid and Basdrud – Isfahan. We'll have a special photo permit and the support of the railway. This will allow us to see the most spectacular parts of the line. It is worth remembering that there is little or no road access to most of the dramatic spots. On sections with only occasional daylight trains we will use a charter train to make the most of the unique opportunity."

Details from mail@FarRail.com

(iv). OLD NEWS –

(a). STEELWORKS LOCOS.

In 'Dampf & Reise – Überseische Bahnen' magazine No. 23 (July-August 1990) is the following snippet on p. 5 (Translation by Editor).

"\$329 IRAN. KM-Locos for Steelworks.

A 'big' order worth some 33.4 Million Deutschmarks has been gained by Krauss-Maffei from Iran. For a new works railway in Isfahan the Mobarakeh Steel Co. has ordered ten diesel-electric Bo-Bo locomotives of 1600hp."

(b). From 'Überseische Bahnen' 3/1986 p.36: The Iranian State Railways had ordered 400 passenger coaches from

Wagon Pars Co., Teheran. They should be delivered by 1989."

(v). MEMORANDUM OF UNDERSTANDING WITH ITALY.

From 'R.G.I. 29.01.2016: Italy's Minister of Infrastructure & Transport Graziano Delrio and his Iranian counterpart Abbas Akhoundi signed a memorandum of understanding for co-operation in the rail sector when Iran's President Rouhani visited Italy on January 25.

Italian national railway group FS said it had been active in the region since 2001, and has recently restarted contacts with its Iranian equivalent RAI. The Italian group's Italferr engineering subsidiary is to provide technical assistance for the design of the 400 km Tehran – Qom – Esfahan fast line, while Italcertifer is to provide certification services for the 900 km Tehran – Mashhad electrification project and has been working on preliminary designs for an Iranian infrastructure and rolling stock testing facility. It is also preferred bidder for a metro contract in Mashhad."

On 09.02.2016 the 'Jerusalem Post' reported: "The Ferrovie dello Stato (FS) signed an agreement with its Iranian counterpart on Tuesday to develop Iran's rail system, Ferrovie said.

Foreign firms are keen to exploit opportunities in Iran after the country emerged from years of economic isolation last month when nuclear-related sanctions were lifted.

Ferrovie Chief Executive Renato Mazzoncini signed the agreement with Iranian Deputy Transport Minister and railway chief Mohsen Pour Sayed Aghaei during the third mission of Italian businesses to Tehran in recent months."

(vi). MEMORANDUM OF UNDERSTANDING WITH SIEMENS:

From 'R.G.I.' 13.01.2016: "IRAN: Islamic Republic of Iran Railways and Siemens signed a memorandum of understanding for potential co-operation in the rail sector in Tehran on January 6.

A Siemens spokesman told 'Railway Gazette' the company intends 'to engage in talks on improving infrastructure in the rail sector as agreed by both parties', and stressed Siemens was 'strictly complying' with legal requirements, particularly in the area of export controls.

Iranian media reports said Siemens could participate in projects including electrification of the Tehran – Mashhad route and the future Tehran – Esfahan fast line, supplying signalling systems, electric locomotives and 500 coaches. Siemens would also provide training services, and would be required to enter into technology transfer agreements with local partners.

In 2008 Siemens and MAPNA signed a technology transfer agreement

covering the production of 150 IranRunner diesel locomotives, the first 30 of which were supplied from Germany. However in January 2010 Siemens announced it would withdraw from the Iranian market on the completion of its existing contracts."

On 29th. Jan. 2016 another report: "A memorandum of understanding for co-operation in the mainline and urban transport sectors was signed by Alstom and Iran's Industrial Development and Renovation organization in Paris on January 27. Alstom said the aim was to initiate discussions for industrial cooperation with IDRO, including the possible formation of a joint venture to undertake rolling stock production and maintenance in Iran. "Alstom is pleased to renew its collaboration with the Islamic republic of Iran, which will benefit the country's economy, modernise its industry and enhance the mobility of its residents," said Alstom's incoming Chairman & CEO Henri Poupart-Lafarge. 'This MoU reflects the strong desire of the Iranian authorities to develop the country's railway sector and Alstom is looking forward to accompanying Iran in its transformation.' "

(vii). MUMBAI – MEDITERRANEAN RAIL AND SEA CORRIDOR AGREED.

From 'R.G.I. 25 Jan 2016: "INTERNATIONAL: Railway, shipping and port officials from Iran, Azerbaijan, Georgia and Ukraine met in Azerbaijan on January 12 to agree plans for the development of freight transport corridors between the Indian port of Mumbai and the Mediterranean.

Three routes are offered. All start with the maritime leg from Mumbai to the Iranian port of Bandar Abbas and then by rail through Iran. Land and two Caspian Sea shipping options are then offered to Azerbaijan, with onward rail transport to Georgia's Black Sea ports of Batumi and Poti.

Railways of the Islamic Republic of Iran said the 5,527 km route via Qazvin and the Iranian/Azerbaijan land border crossing at Astara would take 13 days and cost US\$2,190 per TEU; a cross-border rail link is planned for the future. The 5,288 km route with a shipping connection from the Caspian Sea port of Amirabad in Iran to Baku in Azerbaijan would take 22 days and cost US\$2,200, while the 5,205 km route via the Iranian port of Anzali and Baku would cost US\$2,275.

Georgia and Azerbaijan have agreed to supply bogies for the break of gauge between the 1,520mm gauge network and Iran's 1,435 mm network, while Iran's Ports & Maritime Organization has committed to completing a train ferry terminal with 2 km of railway and bogie-changing facilities at the port of Amirabad within six months."

(viii.) MASHHAD AIRPORT METRO LINK OPENS:

From 'R.G.I.' 08.02.2016. "President Hassan Rouhani attended the opening ceremony for an extension of Mashhad Metro Line 1 on February 6. Running southeast from Ghadir to Hashemi Nejad Airport with an intermediate station at Parvaz, the 6km extension cost €206M to build, which was financed by Mashhad Urban Railway Corp. The initial 19km section of Line 1 opened for trial services in April 2011, with revenue service following in October that year. It is operated with a fleet of 70 three-car low-floor light metro vehicles produced by CNR Changchun, which run at up to 80km/h.

Line 2 is currently under construction. The 14km route from Koohsangi to Tabarsi will have 12 stations, including an interchange with Line 1 at Hariati. Two more lines are planned in the longer term."

(ix.) LAUNCH OF TEHRAN – MASHHAD ELECTRIFICATION PROJECT.

From 'R.G.I.' 08.02.2014: "President Hassan Rouhani ceremonially launched work to electrify the 926 km Tehran – Mashhad main line when he visited the northeastern city on February 6.

Planning for the 25kV 50Hz electrification project has been underway since 2012. In June 2014 a contract to install and maintain overhead electrification equipment and procure 70 locomotives was awarded to a consortium of Chinese companies CMC and SCU Power and subsidiaries of local industrial group MAPNA. A year later Iran and China finalised an agreement for 85% of the €1.9bn cost of the project to be financed through Chinese loans. Signalling on the route has recently been upgraded under a three-year project undertaken by domestic companies at cost of €32m.

The electrification work is scheduled to take 42 months, and on completion is expected reduce the passenger journey times from 12 h to 6 h and increase freight capacity to 10 million tonnes/year.

Speaking at the launch ceremony, Rouhani said the development of the rail network is an important goal for government. 'Railway development will bring a healthy environment, mental and spiritual tranquillity, inexpensive transport, fuel economy and the enjoyment of short trips for the people of Iran,' he said.

Rouhani said there should be rail links to all of Iran's main ports and to neighbouring countries. 'Islamic Republic of Iran Railways will be connected to Azerbaijan and Iraq in the near future', he said, adding that a long-planned link from Khorramshahr to Iraq would open in time for the next annual pilgrimage in November 2016. 'By connecting the railway to Basra in Iraq, we hope that our dear people and pilgrims of

Imam Hussein can visit his tomb on next Arba'een'."

(x.) URALVAGONZAVAD BUILDS WAGONS FOR IRAN.

From 'R.G.I.' 12.2.2016: "Russian rolling stock and defence group Uralvagonzavod has completed a Type 12-581-01 open wagon custom-designed for export to Iran by its Ural Design Bureau of Wagon Construction.

The Type 12-581-wagon has a capacity of 66.7 tonnes. The 18-100 bogie is an existing 1 520 mm gauge design modified for use on 1,435mm gauge tracks, and UVZ said exports of the type to customers in Asia, Africa and Cuba were also envisaged. Attendees at the unveiling in Russia included Iran's Minister of Industry, Mines & Trade Mohammad Reza Nematzadeh. UVZ General Director Oleg Siyenko said the company has now designed more than 10 wagon types for Iran, of which five have now been certified and a further three are now being manufactured."

B. ETHIOPIA.

(i). (R.G.I. 27.11.2015). "The first freight train on the new standard gauge railway between Djibouti and Addis Ababa arrives at a temporary unloading facility in Merebe Mermersa, 112km south of Ethiopia's capital, on November 21. Construction of the railway has not yet been completed, but freight services have been launched to enable the delivery of large quantities of wheat which the Ethiopian government has purchased for use in areas affected by drought. Deliveries are expected to run for 10 days.

The first train was hauled by a diesel locomotive and took 16 hours to travel from the port to Merebe Mermersa, but this is expected to be reduced to between 10 and 12 hours when construction is completed next year and electric trains are able to run at up to 120kph.

The 756km line replaces the out-of-use metre-gage railway between Addis Ababa and the coast. In 2011 Ethiopian Railway Corp. awarded China Railway Group a contract to build the 330km Sebeta/Addis Ababa to Mieso section, and China Civil Engineering Construction Corp. the contract for the 339km from Mieso to Ethiopia's border with Djibouti."

(ii). **OLD NEWS 1986:** – In 'Überseeische Bahnen' 3/1986 p. 38: "Heavy rainfall on 4.4.1986 heavily damaged the only railway line in the country in the region of Harawa. Operations could only be resumed three weeks later, though between Harawa and Mélo is a bridge that can only be traversed at 10kph until further notice. The three-week long interruption caused many economic problems in both Ethiopia and Djibouti. In Djibouti prices for Ethiopian fresh

produce rose to dizzying heights within a few days; At the port of Djibouti 18,000 tons of various import goods and 40,000 tons of foodstuffs – grain, rice, milk powder) for Ethiopia were blocked."

C. TURKEY.

(i). **PIPE BOMB EXPLODES ON OVERPASS NEAR ISTANBUL METRO.** (From 'Jerusalem Post' 02.12.2015) "Five people were injured when a pipe bomb exploded on an overpass near an Istanbul metro station on Tuesday, the district mayor said, halting some train operations and heightening security fears in Europe's biggest city. Turkey has been on high alert since more than 100 people were killed by two suicide bombers in the capital Ankara in October, three months after a similar attack at a town near the Syrian border in July left 33 dead.

Tuesday's blast near the Bayrampasa metro station came at the height of the evening rush hour, district Mayor Atilla Aydiner told 'A Haber' television. Bayrampasa is a residential and industrial area on the European side of Istanbul. Grainy CCTV footage showed a large flash of light on the overpass followed by what appeared to be burning embers showering to the ground as cars drove below. Photographs on social media showed what appeared to be dozens of people walking alongside overground train tracks after trains had been halted, Although Istanbul's metro is largely underground, it runs above ground in some places including around Bayrampasa."

(ii). CHINESE INVOLVEMENT:

"Turkey to get railroads from China" At the heart of Turkey's Middle Corridor initiative lies the Baku-Tbilisi-Kars railroad, which is expected to be completed in 2016. Construction on this line had started back in 2007, however several delays and postponements due to financial issues and conflicts between the involved governments and contractor firms have slowed down progress of this project. The idea is that once this project is completed, a ferry link will connect the line to Kazakhstan's Caspian port of Aktau from where the railroad will extend towards China, while towards the opposite direction the line will connect with Turkey's domestic network, pass underneath the Bosphorus through the Marmaray tube which is also under construction, and reach Turkey's border with the European Union.

The Railroad Cooperation Agreement between Turkey and China, which is actually a renewal and extension of a framework agreement reached five years ago, is exclusively about building a high-speed railway link between Kars and Edirne, in other words between the easternmost and westernmost points

of Turkey, with Chinese funding and Chinese technology. Turkey's aims are twofold: first, to modernize its domestic rail network through new high speed rail lines, and second, to improve its ability to reach export markets in Central Asia and beyond, which is crucial at a time when the country's export routes to the Middle East are largely blocked due to war and instability in Syria and Iraq, disagreements over road transportation with Iran, and political problems with Egypt.

Turkey was interested not only in the final product but also in the technology, and while the American and European bidders were refusing access to technology, the Chinese company was the one promising technology transfer and joint production." The full article with other information as well is at: <http://atimes.com/2015/11/turkey-to-get-railroads-from-china-not-mis-siles/>

(iii). ISTANBUL METRO EXPANSION:

Both from 'Today's Railways Europe' 241p.14: (a). "In late November boring of the tunnels for two new metro lines started. The Ataköy - İkitelli line will be 13.39km long, in bored tunnels, with 12 stations in cut-and-cover boxes. Situated in the European side of Istanbul it is to be completed and handed over to the municipal authorities 1140 days after the contractor takes possession of the work area. Design capacity will be for 45,000 passengers per hour per direction, and end-to-end journey time will be 19.5 minutes.

The Dudullu – Bostancı line is situated on the Asian side of the city, and will run from north (Dudullu) where the depot will be situated, to south (Bostancı), a distance of 14.2km with 13 stations. At Bostancı there will be a connection with ferry services on the Bosphorus. The new line will be fully automated, with driverless trains, CBTC and platform doors and screens at stations. Construction is to be realised within 1140 days. Both new lines are to be completed in 2019.

(b). CRV WINS STOCK ORDER:

On 15 July 2015 Istanbul municipality invited tenders for 75 4-car metro trains for the M7 Kabatas - Mecidiyeköy – Mahmutbe metro line, on which work began in February 2014 and which is scheduled for completion in 2017. The bids were opened on 17 November. The lowest, €277 million, came from CNR Corporation subsidiary Changchun Railway Vehicles (CRV). CNR already has an assembly factory in Ankara. Other bids were received from Hyundai Eurotem, Alstom and Siemens. The first two trains are to be delivered 22 months after contract signing, the remainder at a rate of two per month after that, with the final train being delivered 58 months after the contract is signed, and being then subjected to 60 days of test running."

(iv). HALKALI INTERMODAL TERMINAL OPENS:

From 'Today's Railways Europe' 241, p. 53.

"Situated 27.6km from Istanbul-Sirkeci terminus, Halkali has been closed since June 2013, while line upgrading westwards thereof in connection with the Marmaray project was in progress. Reopening took place on 19 November 2015, enabling Metrans to return to Halkali with its shuttle service from Dunajska Streda (Slovakia), which had previously, like all other freights, terminated further west at Cerzekköy. Departures from Halkali are at 21.13 on Mondays, Tuesdays, Thursdays and Fridays, returning from Slovakia at 22.33 on Mondays, Wednesdays, Fridays and Sundays. Originally it had been planned to close the line between Cerzekköy and Halkali for just 75 days!"

(v). MARMARAY COMPLETION RESCHEDULED.

"The new target date is late 2017, following paralysis of work in 2014. Reconstruction of the line between Gebze and Pendik is to be completed during the first quarter of 2016. This involves the laying of a third track, for use exclusively by high speed trains, the existing double track then being used by suburban services. Between Pendik and Istanbul city centre temporary bus services continue to be provided.

The section of line between Halkali and Kazlıcesme (the western end of the existing Bosphorus tunnel) will not be completed until late 2017. Here again three tracks are being provided, and stations rebuilt. However the stretch of line between Bakırköy and Kazlıcesme will probably be reopened in advance of this date. The stretch between Ayrilikcesmesi (the eastern end of the Bosphorus tunnel) and Pendik will not reopen until late 2017, enabling high speed trains to reach the surface terminus at Haydarpaşa. The stretch of line between Söğütlücesme and Ayrilikcesmesi will be inaugurated before the end of 2017. So far on most of these stretches of temporarily closed line only the old track has been lifted, and tracklaying has not yet started."

(vi). SAMSUN TRAM EXTENSION.

From 'R.G.I.' 28.01.16: "Tracklaying on the southeastern extension of the Samsun tram line started on January 27. The 14km section from Gar to Tekkeköy is due to open on October 10. The extension will nearly double the current 15km route between Üniversite and Gar. The fleet of 21 trams is to be enlarged with eight Dumazler vehicles under a €12.3M contract placed last year."

(vii). IZMIR SUBURBAN EXTENSION OPENS.

From 'R.G.I.' 08.02.2016: "A

22km. extension of Izmir's IZBAN suburban rail network opened on February 6, marking the first extension since the two lines opened in 2010. The Southern Line has been extended south from Cumaovasi to Tepeköy with six stations. The first 23km. Section of the Southern Line, from Alsancak to Cumaovasi, opened in August 2010. The Northern Line, linking Alsancak with Aliaga, opened in December 2010. Both lines are operated by the IZBAN joint venture of Izmir Municipality and state railway TCDD, which owns the infrastructure. The two routes are electrified at 25kV 50Hz and are operated by three-car EMUs- CAF supplied the original Class 22000 fleet of 33 trains, with a further 40 from Hyundai Rotem designated Class 23000."

(viii) PRODUCTION OF HIGH SPEED TRAIN SETS:

From 'R.G.I.' 09.02.2016: "Bombardier Transportation and local supplier Bozankaya signed a memorandum of understanding in Ankara on February 9 to co-operate in high speed train production. The framework agreement envisages construction of a factory should the two companies win orders for high speed rolling stock from national operator TCDD, which is expected to call tenders for at least 80 trainsets later this year. These would support the expansion of Turkey's high speed network, which is planned to reach 4 000 route-km by 2023.

The Turkish government has said that extensive local production will be required for future rolling stock orders, and it has sought to support the development of a domestically-designed 250 km/h EMU under the National Train Programme, in which Bozankaya has been among the partners. With factories in Ankara and Salzgitter in Germany, Bozankaya's background is in producing trolleybuses and light rail vehicle bodyshells, as well as providing sub-components to the major systems integrators for various rail applications. It is now working on designing and producing its own metro and tram designs for the Turkish market.

"Turkey has a clear vision of the critical role rail plays in sustainable economic development and is making strategic investments necessary to ensure that vision is realised", said Furio Rossi, Managing Director for Turkey at Bombardier Transportation. "We at Bombardier see great potential in these plans and are pleased to have found a strategic partner in Bozankaya."

A spokesperson for Bombardier told Railway Gazette that while the initial framework agreement covered the local production of high speed trainsets, it 'opened the door' for a wider partnership covering the whole of the Turkish rail market."

(lx) . **OLD NEWS 1986:** – from 'Überseische Bahnen' 3/1986 p.36: KONYA. "The city administration of Konya plans the construction of a 20km tramway and is seeking 16 second-hand trams each with a capacity of 370 persons. [sic.]

D. IRAQ.

OLD NEWS 1990: In 'Dampf & Reise – Überseische Bahnen' magazine No. 23 (July-August 1990) is the following snippet on p. 5 (Translation by Editor). § 327. IRAQ.

"New line between Euphrates and Tigris. Overshadowed by the Gulf War and therefore still widely unknown is the fact that in the 1980's Iraq commenced a substantial construction programme. Already in 1983 a new line from Baghdad north-westwards to Hsaiba on the border with Syria with a branch from Al Qaim to the phosphate works at Akashat – in all some 522km. - was completed. In 1987 a 252km long West-East transversal link from Haqlaniyah on the Baghdad – Hsaiba line via Baiji on the classic 'Bagdadbahn' line Baghdad – Mossul and on to Kirkuk commenced operations. Both lines are laid with to a high-quality (UIC-60 rails, 24-ton maximum axle load, minimum curves of 5,000m. and maximum gradients of 5 per thousand for regular high-speed traffic at 250km/h.

Further projects are in the planning stage, including a direct link with Turkey avoiding the 'duck's beak' Syrian section, a link with Kuwait and – the most ambitious project – a link with the Jordanian port of Aqaba on the Red Sea. This last-mentioned line would be over 1,000km long ; it would leave the Baghdad – Hsaiba Railway at Haqlaniya and head south-east via Rutba initially to Amman, the Jordanian capital. This is already linked via a section of the legendary Hejaz Railway and the Aqaba Railway, opened in 1975 with German help, to the port of this name on the Red Sea – albeit in 1050mm gauge. Aqaba is an important port for Iraq – some 8 million tons of goods are conveyed by road each year between Aqaba and Baghdad.

The IRR currently operate a total of 1,721km of standard gauge lines. The main magistral in the north-south line from the (currently closed again) Syrian border via Mossul and Baghdad to Basra and the new harbour of Um Qasr on the Shatt al Arab. The stock includes 436 Diesel locomotives, 654 passenger carriages and 12,827 goods wagons. The traffic statistics have more than doubled between 1968 and 1988, from 1.7 to 3.9 million passengers and from 2.8 to 6.4 million tonnes of freight. The 533km long metre-gauge line from Baghdad via Kirkuk to Erbil, which was worked with steam until the end, is apparently closed since 1988." (The information is stated as coming from Benno Bickel.)

E. SAUDI ARABIA.

(i). **SRO INTRODUCES 180km/h PUSH-PULL TRAINS.** From 'R.G.I.', 7.12.2015: "President of Saudi Railways Organization Mohammed bin Khalid Al-Suwaiket attended a ceremony in Dammam on December 7 to mark the start of faster passenger services to Riyadh using four push-pull trainsets supplied by CAF of Spain. Designed for a maximum speed of 200km/h, the trains will operate at up to 180km/h, 'even during extreme weather conditions', according to SRO.

Al-Suwaiket said that the new push-pull trains were 'a quantum leap' for SRO's passenger services. Designed to meet a demanding performance specification, each train has 274 seats in two classes spread over five cars with stainless steel bodysells, the sixth vehicle being a diesel power car. Passengers have access to wi-fi and video and audio entertainment channels, and a dedicated area is provided for passengers with reduced mobility. The trains are fitted with ERTMS, event recorders and smoke detectors.

The trains are entering service following completion of SRO's project to double track the 449km Dammam – Riyadh main line, which will allow an increase in the number of services from the previous five daily return workings plus additional trains at weekends."

(ii). **JEDDAH METRO.** A note in 'R.G.I.' 07.12.2015 announces that the Jeddah Metro Company is seeking pre-qualification contractors for Rolling stock, train control, signalling system (RSTC) and automated fare collection system (AFCS), a deadline of 10.12.2015, more details online.

(iii). RIYADH METRO. FIRST TRAINSET.

From 'R.G.I.' 23.02.2016: "The first Inspiro trainset for the Riyadh metro was unveiled at Siemens' Simmering plant in Wien on Feb. 23rd. A trainset is currently being tested at the Rail Tec Arsenal climate chamber in Wien, and dynamic trials at the Siemens test centre at Wildenrath in Germany are scheduled to begin this spring.

'Our project teams in Wien and Saudi Arabia poured all their heart and soul into the development and completion of the first train which is specially equipped for the extreme climatic conditions in Riyadh,' said Siemens Mobility Division CEO Jochen Eickholt.

Siemens is part of the BACS consortium with Bechtel, Almbani General Contractors and Consolidated Contractors Co. which is building lines 1 and 2 of the driverless metro network. Siemens' €1.5bn share of the contract includes the rolling stock, signalling and electrification equipment. Siemens is to supply 45 four-car In-

spiro trainsets for Line 1 and 2 and 29 two-car sets for Line 2. The air-conditioned aluminium-bodied trains will have a maximum speed of 90km/h. Work to adapt the Inspiro design to local conditions has included fitting the bogies, traction systems, brakes and doors with seals and filters to reduce sand ingress.

Construction of the six-line metro network has been divided into three works packages. Bombardier is supplying 47 two-car Innovia 300 trainsets for Line 3 as part of the ArRiyadh new Mobility Consortium. Alstom is building 69 two-car Metropolis trainsets for lines 4, 5 and 6 at its Katowice plant in Poland as a member of the FAST consortium which also includes FCC, Samsung C&T, Freyssinet Saudi Arabia, Strukton, Setec and Tyspa.

F. EGYPT.

CAIRO METRO.

From 'R.G.I.' 03.12.-2015: "National Authority for Tunnels has awarded Alstom a €15m contract to supply signalling for the new depot on Cairo Metro Line 1. Alstom is to supply computer-based interlocking, SCADA systems for traffic and traction power supplies, and telecommunications to support fire detection, phones and CCTV systems. The fit-out is due to be completed in 2017.

Earlier this year NAT awarded signalling and infrastructure contracts for metro Line 3 to consortia including Alstom. A contract for Phase 4A was signed in February and for Phase 3 in November."

And from 'R.G.I.' 10.12.2015. "The European Bank for Reconstruction & Development has agreed to provide a €100m loan to the National Authority for Tunnels, which will support the procurement of 13 trainsets to be used on Line 2 of the Cairo metro. The supplier would also maintain the trains, which are intended to increase the capacity of Line 2 by 23%. The project would also include an on-site training programme for unemployed young people.

The loan is being funded through the EU Neighbourhood Investment Facility, the German Ministry for Economic Affairs & Energy, the EBRD's southern & eastern Mediterranean Multi-Donor Account and the EBRD Shareholder Special Fund. As part of its work in Egypt, the EBRD intends to help increase private-sector participation in urban transport."

G. HEDJAZ.

THE HEDJAZ BAHN IN 1990. A quarter of a century ago..... In 'Überseische Bahnen' 5-6/90 (November 1990-Feb. 1991) pp.4f. is an article by Johannes Müller:

"Although the Near East stands once again at the centre of world attention, we will hear pay attention to a totally different aspect: The venerable Hedjaz Railway. Since the report in 'Dampf & Reise /

Überseeische Bahnen' in issue 15 (1/89) almost two years have passed, so that several changes – positive as well as negative – need to be reported.

Especial thanks go therefore to our reader Hubert Strasser, who has sent us his observations from a visit to Jordan.

Damascus – Amman:

The good news first: The direct train link between the capitals of Syria and Jordan has recommenced after a pause of almost a decade! It is therefore possible once more to ride over the entirety of the remaining lines.

The section from Damascus to Dera'a, the Syrian border station, was not served since the beginning of the 1980's due to construction works in connection with the entry of the standard gauge line to Damascus-Cadem. The international train started then in Dera'a twice a week. Following border disputes in November 1983 this surviving relic was also withdrawn. Nevertheless traffic resumed on the Syrian section following the end of the construction works around the turn of the year 1984/85, although the through international service was not reintroduced.

The train now runs once a week and is also available for foreigners to use when they have the appropriate visa. There is different information concerning the actual days of operation – according to our information on Thursdays from Amman, the return on Fridays, whereas 'Continental Railway Journal' No. 82 reports exactly the opposite! It is advisable therefore to check out the times first. In Dera'a the locomotives are changed during the lengthy customs formalities. Apparently it is theoretically possible that should the diesel locomotives on either side be unavailable, steam locomotives could be brought into use. For Jordan especially – this information comes from the Assistant General Manager there – this amounts to sensational news, since the steam locomotives in this country have not been used for scheduled services for several years.

Damascus - Serghaya, Deraa - Bosra,

There are no confirmed reports concerning steam operation on these two lines. The line to the Lebanese border near Serghaya should be operated, as previously, once per day and during the summer period with steam traction (although the exact boundaries of 'summer' remains unclear.) The two 2-6-0Ts 130-751 and -754 of 1894 are available for the trains which, according to the timetable, should be steam worked on Thursdays and Saturdays instead of the diesel trains which are otherwise used.

In the issue of CRJ mentioned above it is reported that no steam trains work to Bosra during the winter, but at the same time it is stated that one of the two

locos regularly used was overhauled in Cadem in December 1989 – so here, too, the motto has to be – check up for yourself (and then please tell us!)

Amman.

Reports have come from various sources concerning increased activity at the depot in Amman on the locos which have just been standing around there and used very sporadically on special charter trains for Western railway enthusiasts. The background to these measures, as also the occasional use with the Damascus train, could be shortage of spare parts for the Diesel locos combined with shortage for foreign exchange and the uneconomic effect of investment in the rather run-down railway.

Whoever stands on the station and wishes to take photographs in the immediately-adjacent depot should go first to the Direction of the Hedjaz Railway – the building is on the other side of the road directly opposite the station of Amman. Assistant Manager Mu'atamen Khalil Imad-Eddeen is very helpful and speaks English.

From Amman to Jizra, some 40 kilometres to the south near the international airport and visible from the ALIA Gateway Hotel there are still occasional freight trains. These are also often hauled by steam!

Aqaba Railway.

Traffic on the phosphate railway is as lively as it was before, even on Fridays (the weekly rest day) at least two block train pairs run. The two phosphate mines of El Hasa (junction: El Hasa station) and El Abiad (junction near Manzil) on the old Hedjaz Railway line south of Amman are served.

Ma'an – Ras en Naqb.

This line, built for strategic reasons during the Second World War from Ma'an in the direction of Aqaba did actually enjoy a longer life than described in 'Überseeische Bahnen' 1/89. Although, for topographical reasons, the line only managed to reach half of the way to the port of Aqaba, following the war phosphate transport was developed initially by rail to Ras en Naqb (Naqb Ashtar) and thence by lorry. This situation existed until the construction of the through Aqaba Railway line in 1967 which, due to the topography, took a route in a wide curve further south.

Even today the alignment of this branch including the tracks still exists, even though they have not been used since 1967.

Route of the Hedjaz Railway.

Rumours emerge constantly that the bridge between Qatrana and El

Hasa, which has been defective for over a decade, is to be repaired. Nevertheless until now there have not been reports of through workings. Here also it would be desirable to have some up-to-date reports from the place itself.

At various stations along the line one can see often extensive wagon-cemeteries and also some locos, as in Qatrana, Amman, Damascus and not least in the Damascus-Cadem workshops, where however a visit can be problematical.

South of the junction station of Batn al Ghul, where the Aqaba railway diverges from the old Hejaz route, and which can only be reached with difficult and using cross-country vehicles, the tracks and sleepers have in the meantime been mostly removed."

There is also an advert for a map of the historic Hedjaz Railway in A1 format for DM 9.90, published by Röhr Verlag in Brandenburger Str. 10, D-4150 Krefeld! And a photo showing Borsig 2-8-0 162 (1914) and Jung 2-6-0TT (1907) No. 66 standing at Dera'a.

In 'Überseeische Bahnen' 3/1986 p.36: "The Aqaba Railway has received permission from the Jordanian government to build a connection with the Shediya phosphate mines south of Maan with a 30km line. The government will also be involved in financing the line."

H. SUDAN.

OLD NEWS 1986. From 'Überseeische Bahnen' 3/1986 p. 38: "Rail passenger traffic in Sudan is being further reduced. The lines from Khartoum to Nyala, El Obeid and Ed Damazine will now be served only weekly. Shortage of rolling stock, priority of goods traffic (urgent foodstuffs to transport) and disturbances in the south of the country have led to this situation."

I. MIDDLE EAST RAIL TRADE FAIR.

Middle East Rail's 10th Birthday

For the last decade Middle East Rail has been the catalyst for innovation in freight and passenger travel across the Middle East, North Africa, The Indian Subcontinent and Central Asia.

Middle East Rail is the only event run under the esteemed patronage of His Highness Sheikh Mansour Bin Zayed Al Nahyan, Deputy Prime Minister, Minister of Presidential Affairs, UAE and in partnership with the Ministry of Public Works UAE and the Federal Transport Authority - Land & Maritime, UAE.

It is the annual meeting place for railway operators, government departments and world-class solution providers from across the globe looking to plan, design, operate and maintain the railways of the future. This year's conference keynotes include:

H.E. Dr. Abdulla Belhaif Al Nuaimi, Minister of Public Works, Chairman, Federal Transport Authority - Land & Maritime, UAE
H.E. Salem Al Zaabi, Director General, Federal Transport Authority - Land & Maritime, UAE
H.E. Mohammed bin Khalid bin Mohammed al-Suwaiket, General President, Saudi Railways Organization

Faris Saif Al Mazrouei, CEO, Etihad Rail
Alwalid Alekrish, Director of Construction Development Projects & Project Director of the Riyadh Metro, Arriyadh Development Authority, Saudi Arabia

As Middle East Rail enters its 10th year, it is officially one of the largest railway shows in the world. The show now welcomes over 9000 attendees from 100 countries, hosts four days of workshops and conferences and spans over 18,000 sq.m. of exhibition space.

J. UNITED ARAB EMIRATES. ETIHAD RAIL.

(i). From 'R.G.I.' 11.12.2015: "Etihad Rail was granted official safety authorisations to commence commercial operations on Phase 1 of the network at a ceremony in Dubai on December 9.

Operations partner Etihad Rail DB will run two trains per day on the 264km route between Shah and Habshan and the Port of Ruwais, each carrying 11,000 tonnes of sulphur. This follows the operation of daily trial trains, which started in September 2013.

'The start of commercial operations is one of the biggest milestones we have achieved to date and it is an incredibly proud day for Etihad Rail, for the UAE and for the wider Middle East transport sector', said Etihad Rail Chairman Nasser Alsowaidi. 'During the past year, we have already transported more than 3 million tonnes of sulphur from Shah and Habshan to the port of Ruwais for our customer, the Abu Dhabi National Oil Company, as part of the testing and commissioning and trial operations phases. We now look forward to taking our operations to full commercial capacity, which will see Etihad Rail transport as much as 7 million tonnes of sulphur every year.'

Etihad Rail says that it is in advanced commercial and technical negotiations with other prospective partners, including DP World, ESI and Arkan. The company has to date signed more than 50 memoranda of understanding.

The 1,200km network is being built in three phases. Construction of the 264km Phase 1 between Shah, Habshan and the Port of Ruwais began in 2010. The 628km Phase 2 will extend the railway to Mussafah, Khalifa Port and the port of Jebel Ali, as well as to the Saudi border through Ghweifat and the Omani border

through Al Ain as part of the future GCC Railway. The 279 km Phase 3 would serve the north of the UAE."

Etihad Rail currently has a fleet of seven EMD SD70ACS locomotives and 240 sulphur hoppers supplied by CSR Yangtze."

(ii). STAGE 2 TENDERING SUSPENDED.
(From 'R.G.I.' 29.01.2016):

"UAE: National rail developer Etihad Rail announced on January 26 that it had suspended the tendering process for Stage Two of the project and informed all the bidders in writing.

Etihad Rail recently started commercial operation on the initial phase of the planned network, which links Shah and Habshan to the port of Ruwais in the emirate of Abu Dhabi, after receiving the final safety authorisations from the Federal Transport Authority in December 2015.

Stage Two envisages extension of the railway westwards from Ruwais to the Saudi Arabian border at Ghweifat and east from Tarif to the border with Oman at Al Ain, together with branches serving Mussafah, Khalifa Port and Jebel Ali Port in Dubai.

The company said it had suspended the tender process while it reviewed 'the most appropriate options' for the timing and delivery of the second phase. Describing the rail network as 'one of the biggest and most complex infrastructure projects ever undertaken in the UAE', Etihad Rail Chairman Nasser Alsowaidi said 'as we enter 2016, we have been working closely with our partners and stakeholders to assess our strategic priorities for the year. As a result, a decision has been taken to suspend the tendering process for Stage Two while we review the most appropriate timing for this investment.'

On January 18 Etihad Rail confirmed to 'Railway Gazette International' that it had 'introduced a restructuring initiative across the company to further streamline our operations as well as our internal procedures and processes. Like any other company, we regularly review our operations in light of strategic priorities. These changes involve a number of staffing adjustments, as we move towards a flatter management structure, and encourage greater adoption of shared resources and more efficient ways of working.' Local reports suggest that this may affect up to 30% of the workforce.

Etihad Rail said the decision to suspend the Phase 2 tendering would have 'no impact' on the Stage 1 operations, which had already transported 4 million tonnes of sulphur to Ruwais on behalf of Abu Dhabi National Oil Company. It said that it expected to transport more than 7 million tonnes of sulphur per year 'once Stage One reaches full commercial capacity.'

(Intriguing – and one wonders what impact the fall in oil prices and the rise in political tensions may have had in this 'reassessment'. Ed.)

K. KUWAIT. (and SERBIA and EGYPT)

This is a report about finance rather than railways. A report in 'R.G.I.' 02.02.2016 on the opening of another phase of the new central through station in Beograd notes that finance came from Kuwait – this led to a report on 15.11.2012. "The Kuwait Fund for Arab Economic development has agreed a €25M loan to fund the railway systems element of Beograd's long-planned new main station at Prokop. The 3% loan has a repayment period of 18 years and grace period of four years. The lender has also expressed interest in investing in the station buildings and 130,000sq.m. Commercial development planned for the site....." This in turn led to a report from 10. May 2013: "Loan to fund Egyptian resignalling. The Egyptian government has signed two agreements to fund resignalling to increase capacity on the Benha – Zagazig – Ismailia – Port Said route. Kuwait Fund for Arab Economic Development is to lend \$US100M, and the Arab Fund for Economic & Social Development is to lend US\$ 150M. Under the project, Egyptian National Railways' existing mechanical interlockings are to be replaced by centrally-controlled electronic interlockings by the end end of 2016."

112:08.

NOTES AND COMMENTS.

(i). ISRAEL IN 1989: THE RAILWAY MUSEUM AS IT WAS.

In an old issue of 'Überseische Bahnen', 5/89 p.10f. item 315.5 is a brief article with information supplied by Alon Siton – this is also itself now quite historic! "Hardly known is the Israeli railway museum at Haifa East station. Pensioned railway staff care for various withdrawn vehicles in the old workshops and numerous other smaller exhibits. Outside further vehicles rust away on extensive tracks. Amongst other items are two steam locomotive tenders, the last witnesses of steam traction in the country. Both belonged to steam locos of class 'P', 4-6-0's. These six machines, numbered 60 – 65 were built for the Palestine Railways in 1935 by the North British Locomotive Co. They were the most powerful locomotives delivered to Israel at the time."

Photos (by Alon) - see next page - show one of these tenders (unrestored)

standing at Qishon in 1988 and another a cab unit of an Esslingen railcar set in Tel Aviv 1988 with the note "There are plans to reconstruct one of the withdrawn sets."

(ii). OLD TIMETABLE.

In the same publication as above: Item 315.6. "Israel Railways has a new timetable from 2nd. July 1989. The changes are held within limits. Fears that the last passenger train serving Jerusalem might be withdrawn have not been realised – this has not only been retained but even extended from Haifa to Akko. In order to serve better the towns north of Haifa some of the trains on the route Tel Aviv – Haifa Bat Galim – Haifa Merkaz have been extended to Nahariyya. In Tel Aviv all trains now stop at the city centre at the Alosorov St."

(iii). DDR EXPORT ROLLING STOCK.

In 'Eisenbahn Kurier' 12/2015 p.40 in an article on railway locomotives and rolling stock built in the German Democratic Republic for export before 1990 is a lengthy list in which is included:

For Syria: 383 coaches, 2225 wagons
For Iraq: 122 coaches, 2288 wagons.
For Egypt: 258 coaches, 146 wagons..

(iv). WANDERINGS AROUND TULKARM.

Sybil Ehrlich points out that the link to the trip mentioned in 111: is:
<http://www.landsvig.dk/ramwb.htm> - this brings one to 'A Trip to the Wild West Bank'.

(v). HOW THINGS CHANGE.

Recently the Editor received a mail from a long-time subscriber with some legitimate criticism.

"Just to let you know I am not going to renew my subscription to Harakevet. Whilst I am sure it is enjoyed by local Israeli railfans, there is far too much "modern" stuff for my liking. I think the magazine has got right away from what I thought it was established to do... to publish history as well as modern things. For example, listing all the contracts for IR and similar data is, in my eyes, counter-productive. However, I wish you every success with the ongoing magazine." I responded:

"Dear....

First, many thanks for bothering to respond and we will be sorry to lose your support!.....Your criticism deserves however a deeper response and my answer would be the following: When 'Harakevet' started in the mid-1980's there was almost nothing new to publish! Israel Railways comprised a daily train Jerusalem - Tel Aviv and back, a daily train Haifa - Jerusalem and back, roughly hourly trains Tel Aviv - Haifa - Nahariya, all with G12's on old carriages, some freights - also along

the lines into the Negev - and that was it. From other countries I got second-hand reports of occasional enthusiast excursions along the Hedjaz lines in Syria and Jordan. In books and magazines however there was an enormous amount of historical information - on the Bagdadbahn, Hedjaz Railway, world wars and so forth. I made contact with various old railwaymen and soldiers and Palestine Police officers, published articles that Paul Cotterell z'l had researched, and so on. (And also managed to finish my PhD on 'Palestine Railways 1945-1948').

Now - well, the magazine has expanded - normally to 24 pages - but so has the world! Not a month goes by without Aharon Gazit sending me press releases and reports (despite everything, IR still sends me nothing direct!!) - there were track doublings, new lines, new stations, a suburban network has developed around Tel Aviv, new lines into the south, new west-east lines under construction Lod - Airport - Jerusalem, Haifa - Afule - Beit She'an, Akko - Karmiel.... New stock, new locos, now electrification... it is a constant turmoil and on the whole very satisfying and very positive. I like to keep information printed "for the record" because, although I agree the list of tenders is not very dramatic, five years later it is quite fascinating to look over them and see what transpired.

There is a new tram in Jerusalem and a new LRV system in Tel Aviv to report about and other plans too. I would hope in coming years to have more reports on the line to Eilat making further progress....

In other countries - well - there were dramatic developments in Iraq but around most of the northern part of the Near East the picture is frightful and hardly anyone travels there now - ditto Egypt - whereas in Iran, along the Arabian peninsula and the Gulf States things are buzzing in a way that was inconceivable in 1990. This is also 'historic' in its way!

Over the years Steve and I have established a basic regular pattern - the mag. is now A4, has colour, he still does it voluntarily (and I couldn't manage without him doing all the administration and despatch too) but essentially we have colour front and back, an Editorial, a picture or two, Current News, Light Rail, Other Middle East Railways, Notes and Comments – we put this together and then we see how much space is left. I have a LOT of historic stuff on file - things I have copied from old books or transcribed and translated from German magazines etc., things sent to me by a guy in Innsbruck that need translating.... One issue is that in former days I would go round to Steve in Leeds and hand him the pages - quite literally - 'cut and pasted' including photos and maps - now it is all digital, I would need to find a way to scan things in (I have just bought a scanner but haven't yet installed it) and so it is harder to send off old b/w pictures and much easier to send along colour pics. received electronically as JPEG. And that means that more current photos of Israel or Saudi Arabia or similar get used. That is an imbalance of which I am aware. (I also use editorial prerogative to stick in items which are only on the edge of the 'Middle East' - e.g. Eritrea - or which have a rail-related link to Jewish history elsewhere - e.g. Holocaust memorials. These don't take up too much space normally.) Sometimes I cut out a fair bit of what Aharon sends me - I don't use the photos he sends of politicians shaking hands and so forth - and I sometimes wonder whether to include all references to special timetables or specific schedules for trackworks or sports events - but these are also, after all, 'history'.

The latest issue has Israel etc. stuff till p.11 and then 8 pages of 'Other ME Railways' and that brings us to p.19, so there were only a few pages left - though there is not always so much 'Other ME' stuff and sometimes hardly any Notes & Comments - so then we have two pages of a memoir of a recent but NOT current and in fact quite historic trip in Turkey/Syria and two pages on Haifa plans in the 1930's - and an historic photo on the back. You are right - it IS imbalanced between Current and Historic - but that is simply because there is so much Current compared to what there used to be!! On file I have lengthy reports on travels in Turkey, Syria, French railwaymen in Syria in 1939 and so forth. I could fill up the next three issues I suspect just with these and cut out all current news. But - finding the balance will never be easy.

One reason I do this magazine is, quite simply, that there are so many lies and so much misinformation spread about Israel (but not just Israel) and I feel it is important that in some university library, somewhere, in a couple of decades interested students will have access to true historic reports. Copies are sent to many such institutions for this reason."

(vi). WESTERBORK MEMORIAL WAGONS.

From the website of the Concentration Camp Museum at Westerbork near Hooghalen, The Netherlands:

"Historische wagons en monument als decor voor speciale herdenking
De ontwikkeling van het gebied rondom het kampterrein is in 2015 wederom doorgezet. In april van dit jaar zijn twee historische goederenwagons geplaatst op 'de Rampe'; de plek waar in de Tweede Wereldoorlog de treinen naar de vernietigingskampen in het oosten vertrokken. Zij vormden het decor voor de Herdenking 70 jaar Bevrijding kamp Westerbork op 12 april."

Translation: (*Translations from Dutch by the Editor*): "Historical wagons and monument as decoration for special memorial ceremonies. The development of the area around the area of the camp has been continued in 2015. In April this year two historic goods wagons were placed at 'the ramp', the place from where the trains left for the extermination camps in the East during the Second World War. They formed a background for the ceremony for the 70th. Anniversary of the liberation of Westerbork Camp on 12th. April."

Photos show that the exhibit comprises two German G10 vans, one with a brakeman's hut, both painted brown. There was however a critical newspaper article on this exhibit and also a rather angry response from the Director of the Museum: 02.05.2015.

"In Westerbork there stands a lie in the landscape" says Peter Middendorp in his column in today's 'de Volkskrant'. He means thereby the two goods wagons which have been standing there since 12th. April this year on the area of the camp of Westerbork. One can of course have different opinions concerning the exhibition of such wagons and whether they really contribute much to the knowledge and the experience of the history of this place, but in order to do this one ought at least to have some knowledge of the facts - and this is missing from Middendorp's column. One lie is that all transports from Westerbork took place with passenger trains. What we do know is that about a half of the transports indeed consisted of coaches and that the other deportation trains comprised goods or cattle vans. You don't need to be a railway expert to see that often the deportees were transported not in a carriage but in a wagon. Everyone knows this picture but Middendorp apparently not. And he does not seem to have read any of the documentation on the Westerbork camp, whether written at the time (Philip Mechanicus, Ety Hillesum) or after the war (Elie Cohen, Jules Schelvis) - they really do refer to goods vans.

Middendorp considers it a lie that the wagons (there are incidentally two of them) - are marked as 'original' and, he writes, he is unsure whether people were really carried in these 'false' wagons. Perhaps it would be good to cite here from the texts which the Memorial Centre Kamp Westerbork has placed at the wagons:

'The Nazis used both passenger coaches and goods vans for their deportations from the Westerbork



"Former IR GM-G12 diesel locos which were bought by NRE of Mount Vernon, Illinois for 'recycling' and rebuilding for further resale. 8th. Dec. 2014."
(Photo: Henry Posner III)



הרכבת

camp. These came from the whole of occupied Europe. The type of wagon which stands here was also used for this purpose. Whether these specific wagons were used or not is not known. The underframe and the steel framework is original and from before the war. The timbers have been renewed, as has the lettering. For this the situation in 1942-43 has been used as a basis."

Incidentally, but Middendorp seems to have overlooked this, the Memorial Centre has actually acquired six vehicles, one of which is a passenger coach; they await transport and restoration, and then the visitor will be able to see these as well.

One comment must be made to the last sentence of Middendorp's column. "A dumb, dead thing can sometimes be brought to life by an historic narrative, but sometimes this does not work." Should he come and stand by the wagons, he will hear a different version just like all other visitors do. In fact the names of all the deportees, per Transport, in total 107,000 Jews and 245 Roma and Sinti. On the date of the relevant transport in 1942, 1943 or 1944 the relevant list will be read. The names on these Transport Lists are then named until the date on which a following transport departed, Day in, day out, the whole year. These 'Spoken Names' can indeed be described as a 'living narrative' next to the wagons!

Just think – one telephone call and all these inaccuracies and suggestive insinuations could have been avoided; and on top of that, think of the feelings of the survivors and their relatives.

Dirk Mulder, Director, Memorial Centre, Camp Westerbork."

(vii). NOTES ON O&K.

Orenstein & Koppel constructed in Berlin several passenger carriages for Israel Railways. (Nos. 51 – 58 in 1955) The Editor, living in Berlin, often wondered where and how. A biography of Benno Orenstein – "A Jewish Locomotive Builder" by the late Alfred Gottwaldt (Hentrich & Hentrich 2015) gives a little more information on the complex history. Benno Orenstein was born in 1851 in Posen (now Poznan – in 1895 a fifth of the population of ca. 70,000 was Jewish) and in April 1876 founded his first 'offene Handelsgesellschaft' with his partner Arthur Koppel, dealing in iron, steel and railway construction equipment. They concentrated initially on 'Feldbahn' of 500 and 600mm gauge and portable track segments and simple, robust vehicles for hard industrial and also for military use. The principle was introduced of building to specific norms and standards, making supply of spare parts easier, and of building for stock, to enable swift deliveries, rather than always waiting for specific orders. The firm flourished,

going through several changes of organisation, partnerships and address and in 1895-6 establishing factories also near Prague and Budapest, in 1898 establishing a new factory near Drewitz south of Berlin (also termed 'Nowawes' near Potsdam and post-1948 the LOWA Karl Marx VEB Werke Babelsberg) and in 1903 a wagon and pointwork factory in 'Spandau bei Berlin' which also produced signals, turntables and mechanical shovels. In the 20th. century standard-gauge locos and stock were also built in large numbers for the Prussian State railways.

Arthur Koppel died 1908 at the age of 57, Benno Orenstein died in 1926 and was succeeded by his surviving son Alfred Orenstein (born 1885; two other sons had died in WW1); the firm was 'aryanised' in the mid-1930's – at which point it had some 8,400 employees and was busily exporting locos to China and metro cars to Buenos Aires, constructing special goods wagons for the DR. Orenstein was briefly arrested in September 1935 and emigrated soon afterwards, aged 50 to South Africa, together with a son – his wife Irene, who was not Jewish, applied for a divorce in July 1938, took her maiden name Heilmann again, but remained privately in contact with her (ex-)husband and they remarried in 1948. He died there in 1969. Richard Landsberger, a Jewish Director of the firm was also pushed out in autumn 1935, and committed suicide in 1941 to avoid deportation. (In the same period, Generaldirektor Herbert Otto von Klemperer was forced to leave the BMAG as the Reichsbahn had cancelled an order for eight express locomotives due to the 'Jewish influence' in the firm... the Düsseldorf Waggonfabrik Gebr. Schöndorff (later Düweg) was aryanised by sale to Siemens and the owner Albert Schöndorff and his wife were deported in September 1942 from the Netherlands to Auschwitz.) O&K was renamed MBA – 'Maschinenbau und Bahnbedarf A.G.' and from 1941 the addition 'formerly O&K' was dropped by the new owners Hoesch AG of Dortmund.

By the end of the war the various former O&K sites were divided in both parts of Germany plus Poland. In 1949 Hoesch AG gladly resumed the name 'O&K' for the factory in Spandau (Brunsbütteler Damm 144-208) which concentrated on carriages, buses and escalators – the firm's headquarters was in Dortmund-Dorstfeld. Further changes, mergers, closures etc. saw the firm's name finally extinguished in 2011. (In Babelsberg locomotive production ended in 1976 and the factory closed in 1992.)

(viii). OBITUARY: LANCE KING ('CONTINENTAL RAILWAY CIRCLE')

For many years we have cited references from the excellent quarterly 'Continental Railway Journal'. Now comes the sad news: "Lance King sadly passed on Saturday 2nd January after a short illness. He had been in poor health for some time and had been in hospital near his home in Kenton for the last few weeks." Fred Pugh added: "Sad news about Lance, although not really unexpected. We are all grateful to Lance for setting up the Continental Railway Circle, and running it single-handed for so long. He was also responsible for developing the Journal into the high class publication it became, before its unfortunate demise. I remember when he was thinking of setting up the CRC he consulted me on whether I thought it worthwhile. Of course he had my support, but I was working in Swansea at the time and unable to get to London for weekday evening meetings. Our telephone conversation about it took place with me in the telephone box outside Swansea High Street station. I fed countless two shilling pieces into the box before the conversation was over. He was also prominent in the LCGB in its early days. I have many memories of Lance on trips in this country and in Europe. He was a regular supporter of the continental trips I ran for some years for the Railway Enthusiasts' Club, although I don't remember him on the more recent IRS and LCGB/IRS tours. He was an all-round great guy, who will be sadly missed."

Keith Chester added: "I never actually met Lance personally but we corresponded pretty regularly over the years and I shall always remember how courteous he was." John Carter's memory indicates how insular most British enthusiasts were: "I first met Lance while as a schoolboy I attended the regular evening gatherings of gricers at Mill Hill station. At that stage he lived in Mill Hill as his father had worked in the area. In about 1954 I remember being gobsmacked at the photos of strange looking locos Lance brought along which had been taken on the RCTS trip round Paris sheds. This kindled in me (and others) an interest in railways beyond the UK and when I was posted to Germany in the army in 1958 Lance provided much useful information. I went on a couple of trips with him to the Lille area, Belgium and Scandinavia all of which were organised with impeccable efficiency. Like Fred Pugh I remember him being dubious about the viability of setting up the CRC and I still have one of the type written notices he distributed at the time. He had been chairman of the LCGB and was deposed by a "palace revolution" which I think was part of the motivation behind the founding of the CRC. I remember he was the only participant on one of the LCGB trips he organised to France. The first CRC meeting was quite an occasion (despite the "trammers"!) and one met for the first time such notables as Dusty Durrant, Peter Kalla-Bishop, Trevor Rowe and Peter Cotton. The CRC has been a resounding success and through it I set up many long lasting friendships as I am sure did many others and we all owe him a deep debt of gratitude."

UNFORTUNATE INCIDENTS WITH THE ROYAL SALOON IN PERSIA IN 1930.

In view of current interest in building for and contracting with Iran, the following may be of relevance. Often a 'strand' of e-mail correspondence takes place and I feel, as Editor, it is worth sharing at least a part, for the historical record and because it is amazing what specialised knowledge some of our correspondents have!

One such began when an old photo appeared on the internet and there was speculation about the identity and origin of some carriages marshalled behind a British-built 8F loco in Iran. Paul Scheller (who seems to know every obscure wagon ever built worldwide) soon responded: "The four-axle coach in the foreground is the Nohab-built Pullman car (ordered in 1935 by Kampsax for the Trans-Iranian Railway – the Salon car for the Shah delivered in 1934 had other window arrangements)....." Other two-axle vehicles remained harder to identify. Paul added: "We know all passenger coaches ordered by Kampsax and built by Nohab for the Transiranian Railway and also the German deliveries from 1935 onwards. But we have no information about the passenger coaches for the test sections built before 1930. I assume the few passenger cars for the Northern section (built by German enterprises) were all of German construction like the goods wagons, but I have no idea about the passenger cars for the Southern section built by Ulen & Co (vans for Ulen & Co. built by Metropolitan CW&F Co. look very German!) Yet there is a nice story about a 'Royal Train excursion' of the Shah on the Southern section and the fatal result – this is taken from "American Interests and Policies in the Middle East, 1900-1939' by John A. DeNovo, pub. Minneapolis 1963, pp.300f."

"Construction progressed rapidly despite floods and natural incidents, ill-informed official interference, and dilatory payment of advances by the government. The survey was completed in October of 1929, the syndicate giving the government an estimate of \$173 million for the entire line, including the trial sections. The Shah inspected the northern section, which was close enough to completion for him to ride from Bandar Gaz to Sari – one hundred and seven kilometers - in December of 1929. The Shah then demanded a comparable excursion on the southern segment of his railroad.

At this time (December 1929) the southern section was far along toward completion of 250 kilometers from Bandar Shahpur to Dizful except for a few culverts and the Ahwaz Bridge. The down trip from Dizful to Bandar Shahpur took place without mishap, the Shah expressing delight and announcing that the rest of the construction work

should be given to Ulen. Then on January 10, 1930 began the fateful return trip of the special train after the worst torrential rains in years had undermined the fresh road-bed. Special precautions were taken, but about twenty miles north of Bandar Shahpur the Shah's coach, in which he was riding alone, went off the sagging tracks. By the time the train could be brought to a standstill his Majesty was considerably jostled, but he was transferred to another car and the royal train proceeded with the utmost caution. The emergency locomotive following the train soon returned toward Bandar Shahpur, and in a short time the Shah's coach was back on the track and overtaking the special train. To the dismay of Ulen engineers, a few hundred yards from the main train and in full view of the Shah, the unfortunate royal coach again left the rails.

The dejected party finally reached Ahwaz in a deluge of rain only to learn that floods had carried away a kilometer of track north of the city, and that the whole surrounding country was a sea of mud, impassable to autos, so that the Shah had to descend to Ahwaz, where he was marooned for days. The enforced idleness only added to the towering rage of his Majesty, who finally insisted on leaving the city on January 25. Arrangements were made for him to proceed up the railroad track by handcar and, where necessary, on foot. The entire unhappy experience erased any good impressions the Shah might have received on the down trip; he was now furious with the Americans and was said to be not at all disposed to give them further construction work. There was hope, however, that once he returned to Teheran his hostility to Ulen might be allayed.

The débâcle of the Shah's return trip contributed to making the railroad project a football in the tangled game of Persian politics. The required governmental monetary advances were slower than ever in arriving, and led the company to issue an ultimatum on April 17, 1930, announcing that if advances were not paid by April 28 work would stop on May 1 and the railway would be turned over to the government as it stood on May 15. Payments were not made; work was stopped on May 1 on both sections at a time when some ninety per cent of the original contract had been completed; and on May 15 the government forcibly took over the railroad under conditions which did not allow the foreign companies to make proper inventories.

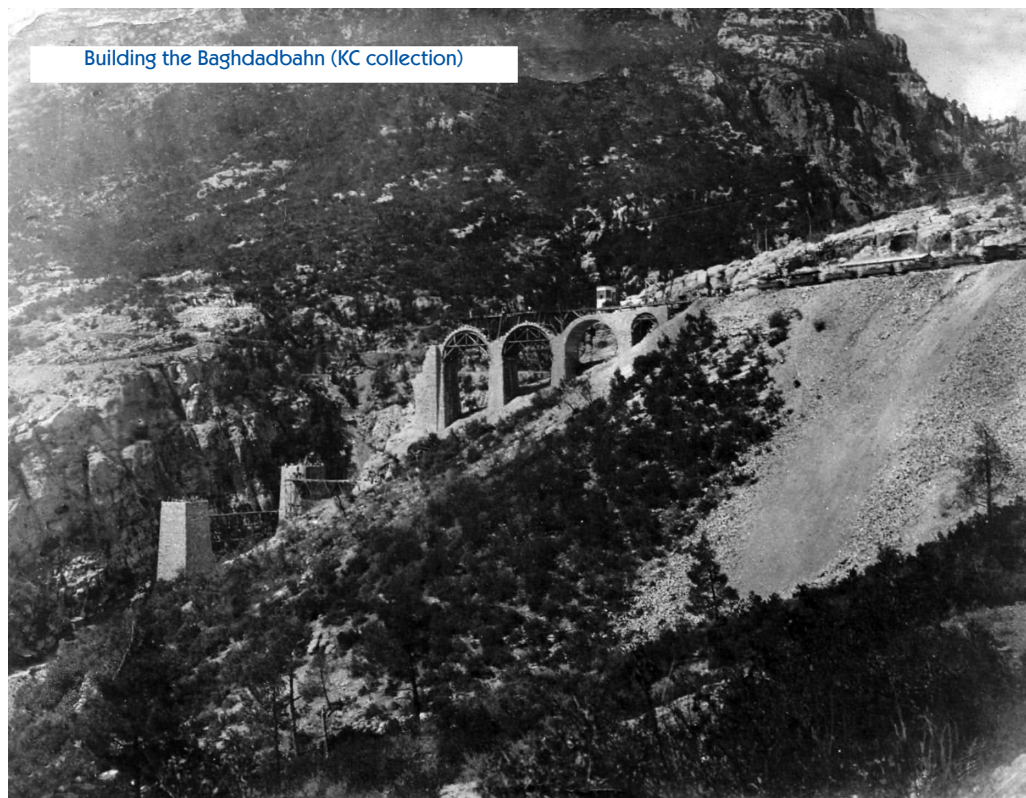
The original syndicate was soon cancelled in view of the Persian government's rescission. Ulen representatives left Teheran on May 17 to meet representatives of the cooperating German firms at Bad Kissingen, where the original syndicate



The first train to connect China and Iran arrived in Tehran on Monday 15th. February 2016, loaded with Chinese goods, thus reviving the ancient Silk Road. (AFP)

was abandoned. Ulen officials then proceeded to Paris to meet with their colleagues who had been participating in the construction of the southern segment. La Société des Bati-gnolles, assisted by an English firm (Stewart and McDonnell), took over the former Ulen position. Ulen maintained only a material interest in the new arrangement.

Although the State Department had extended routine help and advice to the Ulen Company, it had refrained from intervention in the international intrigue which the company thought partly responsible for its débâcle. After hearing the company's version, Wallace Murray wrote that 'postmortems are never very cheerful affairs, but this one was illuminating in some respects.' According to the company's vice-president, M.D. Carrel, the Soviet embassy had intervened with Persian authorities on behalf of the German consortium..."



Building the Baghdadbahn (KC collection)

112.10.

MODELLING NOTES.

From Yaron Dozetes comes a report:

[Nurnberg Toy fair 2015 REPORT : The Israeli HO aspect](#)

By: [Yaron Dozetes](#).(copyright 03.2015)

The information given is purely personal and compiled to the best of my knowledge.

Nürnberg 66th Toy Fair in General is a big International event. 2,857 Exhibitors from 67 countries, 70,084 visitors from 126 countries could be seen all over in the 18 halls.

Our focus is on the Model Railways hall which catches the eyes of all the fair visitors, due to the sophisticated attractions there, which represent the advanced technology in the worldwide model railways hobby.

Hall 4A was highly crowded as usual - a lot of people with a smile on their faces, fascinated by the action that included the figures, the landscape models, the rolling stock, the lighting effects, the control panels and the layouts.

The financial situation bothered almost every one of the manufacturers and they plan to reduce their stock in order to prevent funding problems. For example, Hobby Trade almost collapsed due to wrong investments. Now they are back in production after all their double-deck coaches sold out. The big manufacturer Vollmer closed this year. They sold their tooling and merged into Kibri-Viessmann. Makkette/NPE also decided to stop their production ...this company had very big expectations and they really made very good models. Another company that plans to close is Trident from Austria, well known for Israeli models... a real pity.

One of the main interesting things that already influence the model trains market is the GPS system. A single decoder with flexible antenna for each turnout or signal, so no need for wires. The transmitter range is 50 metres and the signals will be received even in hidden places. The decoder can be placed also in locomotives and all is needed is just to drill a 2mm hole for the antenna. This system can save a lot of money and probably some problems in wiring.

The two big companies - Roco and Fleischmann - presented their European models and the main attraction in their booth was camera that built in the loco cab and transmitting the video to an outside screen .No. 66625 is Roco's SGNS container wagon with 20' containers, price € 31. No.47765 is like the ex-SNCF 63tons container wagon that is used on IR.

From Fleischmann I will mention the Görlitz double-deck driving car No. 5620 (€ 110) which was shortened a bit to adapt it to the double-deck coaches (€65) from Fleischmann (Nos.5625 and 5620). Another interesting item is No. 550502- 3 Talbot weathered wagons with ballast. No. 524101 is an SGNS container wagon of the SBB, with containers. It has, as usual from Fleischmann and like the real models, the pins in the wagons to accept the containers that have holes. Cost of 3-wagon set -€150.

From unknown reason, Heljan - who used to manufacture the Israeli IC3 (and it is still a medium size company that produces HO and OO rolling stock and buildings) was not present, even though they appear in the exhibition catalogue. Probably a last-minute cancellation.

It was very exciting to see REE models ; their Ex-USATC steam locomotive is one of the last

that was seen on Israel's network before it was scrapped. The HO model was presented 2 years ago for the first time at the Nürnberg toy fair. The model is highly detailed, all metal with coal in its bunker, detailed driver's cab and doors. The DCC ready version cost €200. Digital sound version cost €300. A Smoke unit for this loco is not available yet. Rivarossi and Jouef also have this loco, made of plastic body shell with metal chassis. It is a bit cheaper and this version is also DCC ready.

Artitec Presented the UN force soldiers as seen on the Golan Heights. It is a well-detailed models in a 6 persons pack. They also have some very well painted I.D.F. soldiers and military vehicles such as Merkava tank, all well detailed for the Israeli army HO enthusiasts. among their precise models there are more highlights : #10.194 is a synagogue that located at Holland. #10.157-a crossing gate structure that is similar to the one from Jerusalem.#10.214-warehouse, #10-209 a signal box that remind me some of the signal boxes along the Tel Aviv - Haifa line, #87.027-an HO centurion mark 5 Israeli tank of the IDF.

Sudexpress EURO 4000; Only 200 pcs produced for the I.R.(Israeli Railway) version. 50pcs for AC operation and 150pcs for DC operation. The AC version will work only digital and if someone wants to run it analogic, he will have to use an analogic decoder. The model became famous due to the fact that it was chosen as one of the best models for 2013. It is highly detailed and it weighs about 1kg!! I have met a colleague from a Spanish magazine and he told me that it one of the best models they ever tested...according to my experience as a representative of the manufacturer and one of the promoters for the Israeli version, the model has a lot of parts. Just the body shell has about 75 parts !!! In order to run it with a train you must assemble the coupler after pulling the dummy hook. Then you must cut or strongly bend the air pipes to allow the coupler to move freely. By removing

the body shell it is possible to assemble the drop in esu sound decoder (the one recommended by the manufacturer). No need for tools, just follow the drawing in the loco pack. The loco is powered by ESU motor. Price for DC analog is 1550NIS. Price for AC digital ready is 1650NIS.

Herpa & Wiking Presented new cars, trucks, buses and accessories. Lot of models that are seen on the Israeli roads, such as VW, MAN, Mercedes etc. Due to the fact that they have to pay a considerable fee to the prototype companies, there is no cheap prices. A new model of ZIM container based on the real prototype container is available in 20' and 40'.

Kibri Presented a nice model of a bus terminal, well designed and very nice LEDs lighted. Item number 49000.

Marklin/Trix Presented few new European models, but our interest is on Israeli models by Trix - ABB T44 of SJ. Their Görlitz double-deck coaches look finebut are 1:100 scale, unfortunately.

Preiser Presented a nice collection of new items. Except figures, they presented very nice model accessories for beverage market (item 17124). Also some sailing boats and landing stages kit (17315). Interior for model houses (17710), road maintenance such as in Israel (33262), all handmade, painted and highly detailed. For the Israeli market there is nothing better than their Magirus fire engine collection.

Peco/Ratio; Smartswitch is a very nice system for controlling signals, semaphores, turnouts, level crossing etc....easy to set up, servo motors, modular, stand alone system for 12V DC or with DCC. Item 553 from Ratio may be interesting for us; signal box interior, for semaphore control box.

First time at the fair - the Czech company Igra, presented the Israeli Police car - Skoda Octavia, that manufactured privately for the writer of these lines. It is possible to combine with MERTEN No. 2561 which is 6 figures of German Democratic Republic police, with a minor change of the clothes colour they resemble Israeli policemen.

Mabar : The VOSSLOH 333.3 which is very similar to the one that in use on IR, made its first appearance to the public as an exclusive private production. it is a heavy-weight model (about 500 grammes) that have a metal chassis and plastic body shell. The main changes to IR are the headlight and the 2 small direction lights that are rounded and in the wrong location. since it is a RENFE model, The bogies are wider (the track in Spain is wider than the standard gauge). The models are DCC ready or DCC sound. Prices not published yet.

Kleinspoor ; Well...the most similar model resin kit for IR Kirow crane.

Acme : This Italian manufacturer already represent a version of the Ex.-USATC Whitcomb diesel, known as cl. D143. Now they plan to manufacture the version with exhaust chimney, coming up in 2015. This model is very similar to the HBT Whitcomb.

PIKO: No. 54822 - a

container wagon with 3 "China Shipping" 20' containers on it, similar to the 63 tons container wagon of IR, although not in the same livery. This wagon replaces the other SGNS wagons, such as No. 5245 (the good old brown wagon with Maersk container).

Brawa: Not a new item, but definitely worth remembering: No. 45705-Württemberg coach, which is still in use in Syria and was in use on the Israeli part of the Hedjaz railway. This model is with interior lighting and interior decoration. The colour is the same brown as the prototype.

Electrotren: No catalogue available. There is a 63ton containers wagon, with Maersk, Genstar and Evergreen 20' containers.

Heki: Although it is not a rolling stock company, some trees caught my eyes: No. 1970 - 5pcs of pine trees. it is an easy to build kit of these trees using item 3341 - special coloured rubber glue. Even after the tree is ready, it is easy to reposition its branches without the leaves falling. These trees are available also as ready for use: No. 2122 - 4pcs of pine trees, price-6.6\$. A very good deal.

ESU: This company specialized in sound decoders. now they introduce more Locomotives of their own production (such as the amazing DB EMD CL. 66), in addition to their interior lights for coaches.

Viessmann: A cooperation with Preiser leads to moving figures: a man with brush painting, street workers, No. 5055- waving women, No. 5023 - signal man, etc...No. 5048 - is a pair of couplers that transfer the voltage from coach to coach.

Rietze : Will present this year the M.A.N NG 313 Egged Israeli bus, funded by private collector.

LS Models : Very precise European models. they have the best 63 tons container wagon with removable pins, with Y25 Bogies.

PMT: #35201-2 small flat wagons, black colour, usually used for maintenance crew.

Price: 12\$. #:33102- small flat motorized wagon, yellow colour, usually in use with unmotorized maintenance vehicles (Kibri). Price: 99\$.

Auhagen: Now offer also some stations, buildings and houses, made from paper. #41204-telephone poles. #42630-high tension masts.

